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DESIGN REPORT



HABITABLE WATERFRONT IN HONG KONG

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Habitable Waterfront in Hong Kong

Master of Architecture Thesis Report

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Statement

Hong Kong traditionally is a habitable waterfront. People not only lived at waterfront, but also worked at waterfront. From the land-side to the water edge and further to the water-side, there are multi-activities took place there. And the waterfront was totally public accessible that everyone could enjoy their journey walking through it.

Take a look at the current Hong Kong habitable waterfront, it could be divided into two types. One is natural which means that it is under developed, such as Lei Yue Mun and TaiO, and the other is urbanized (after reclamation), such as North Point and the Hampton Place. In these two cases, as we may see, people have a close relationship with water. A lot of water related activities take place there, such as fishing and boating. And people live really close to water and even on the water. People even earn their lives at waterfront, such as the seafood business in Lei Yue Mun, alone this area, and the famous shrimp paste production in TaiO. However, the urbanized habitable waterfront seems lose those qualities. It is claimed as private space. People couldn't get into water, no matter they want to or not. They even couldn't fish at waterfront. The ground floor is always occupied by parking garages. The water-land relationship is interrupted by mega infrastructure.

Nowadays, people live at waterfront no longer because of the functional reason as traditionally it was. Although the continuing reclamation since 1992 fulfills the needs of increasing population, most of traditional habitable waterfronts disappeared at the same time. Living at waterfront becomes symbolic of luxury life. What people want is a sea-view only.

However, could we design a new mode of habitable waterfront that still maintains the living condition and fulfills the high dense development? Is it possible to live closer to waterfront without sacrificing or privatizing the public realm? Could we create a new mode of living that is both traditional and innovative? Could it intensify the relationship between habitable space and production mode as traditional?

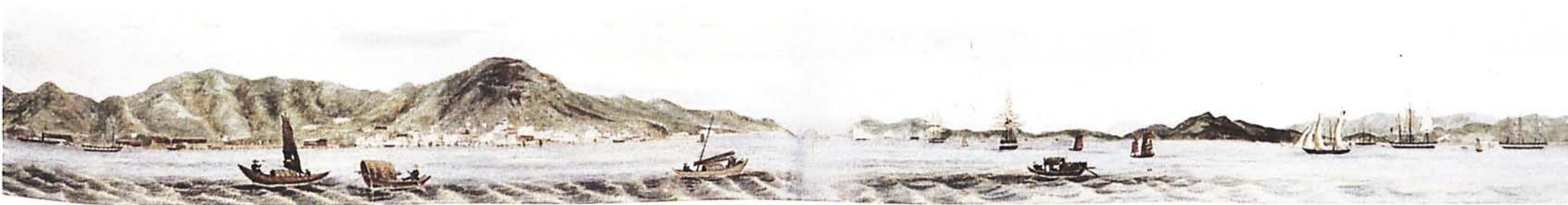


"WE NEED WATER."

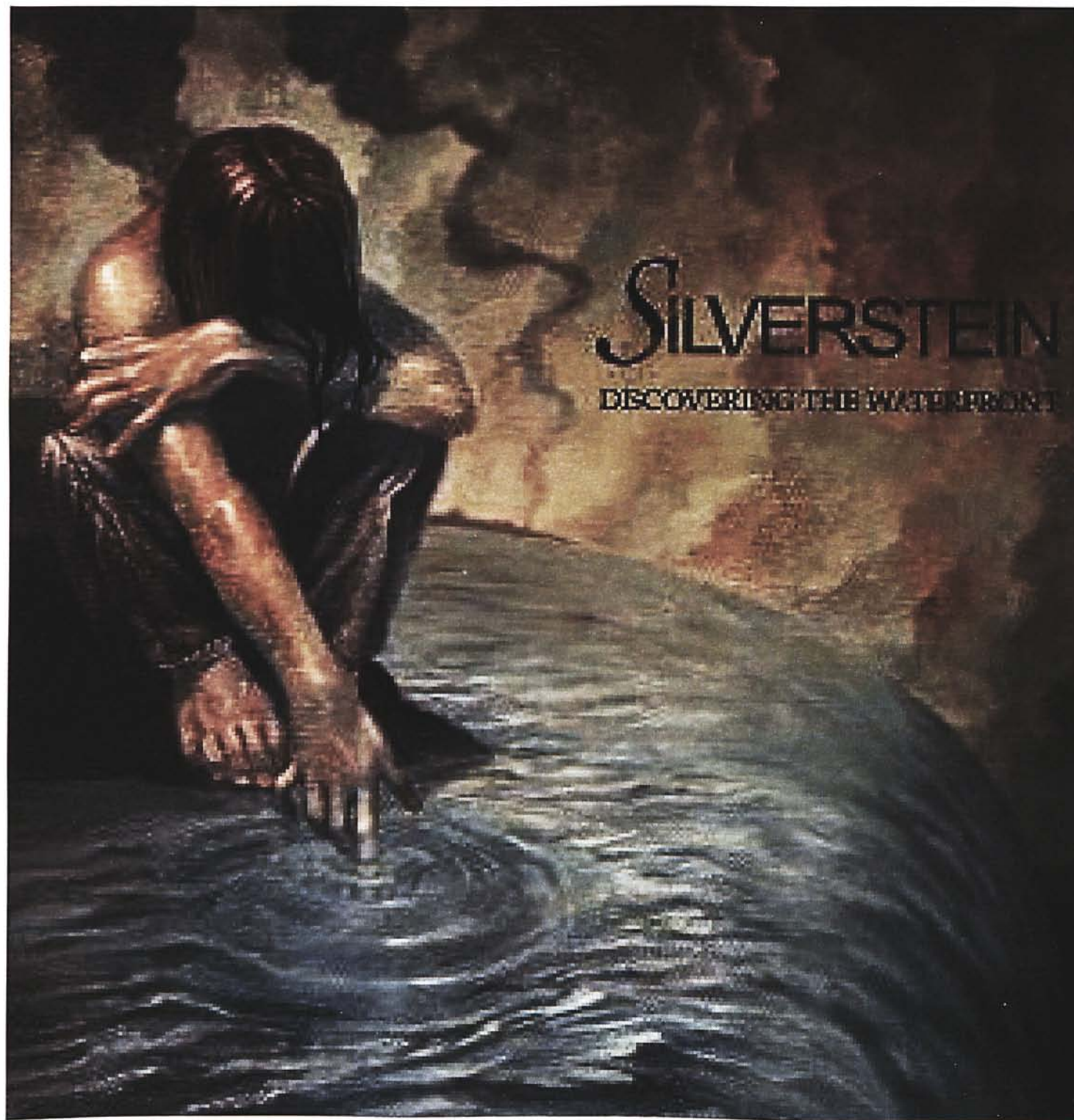
Our human history was given birth by water. The importance of water to safeguard an abundant and stable food supply, due to favorable conditions to hunting, fishing and gathering resources including cereals, provided an initial wide spectrum economy that triggered the creation of permanent villages. That's why all the civilizations situated along large river valleys. Hong Kong is not the exceptional case that its development relies on water too, whenever it was a fish village or is a port nowadays.

Lei Yue Mun is a traditional habitable waterfront that is under developed. Take a look at the history of Lei Yue Mun, we may find that all industries in different ages have very close relationship with water. Once one industry declined or before it declined, the residence could introduce another immediately and it still had to do with water. And Lei Yue Mun is famous at seafood since 1990s. Unfortunately, it is facing the industry decline again because of the global financial crisis resulting in the decrease of visitors and the competition of other harbor villages like Sai Kung and Stanley.

Now there is a pressing need of development in Lei Yue Mun. The government proposed to develop tourism industry here which is a good idea because of its historical and cultural values. However, the Government's removal policy results in the dramatic decrease of aboriginal population. And it is believed that these people would be benefit to the future tourism development. This thesis project is going to design an aboriginal housing to attract the aborigines moving back to the village.



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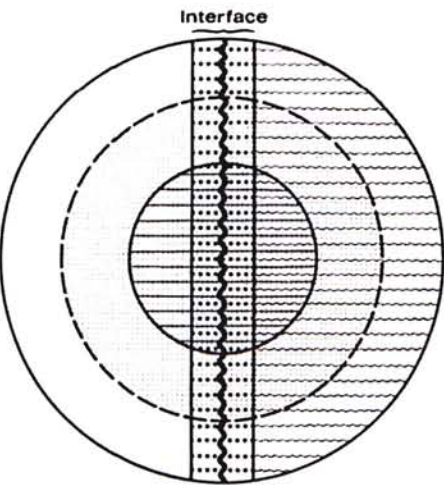


SILVERSTEIN

DISCOVERING THE WATERFRONT

1.0 Definitions

a. Waterfront



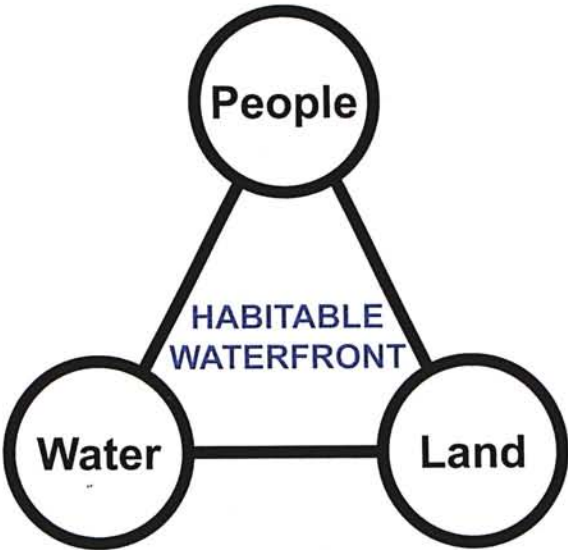
Waterfront is a section of a town fronting or abutting on a body of water. In other words, it is an interface zone of land and water.

b. Habitable



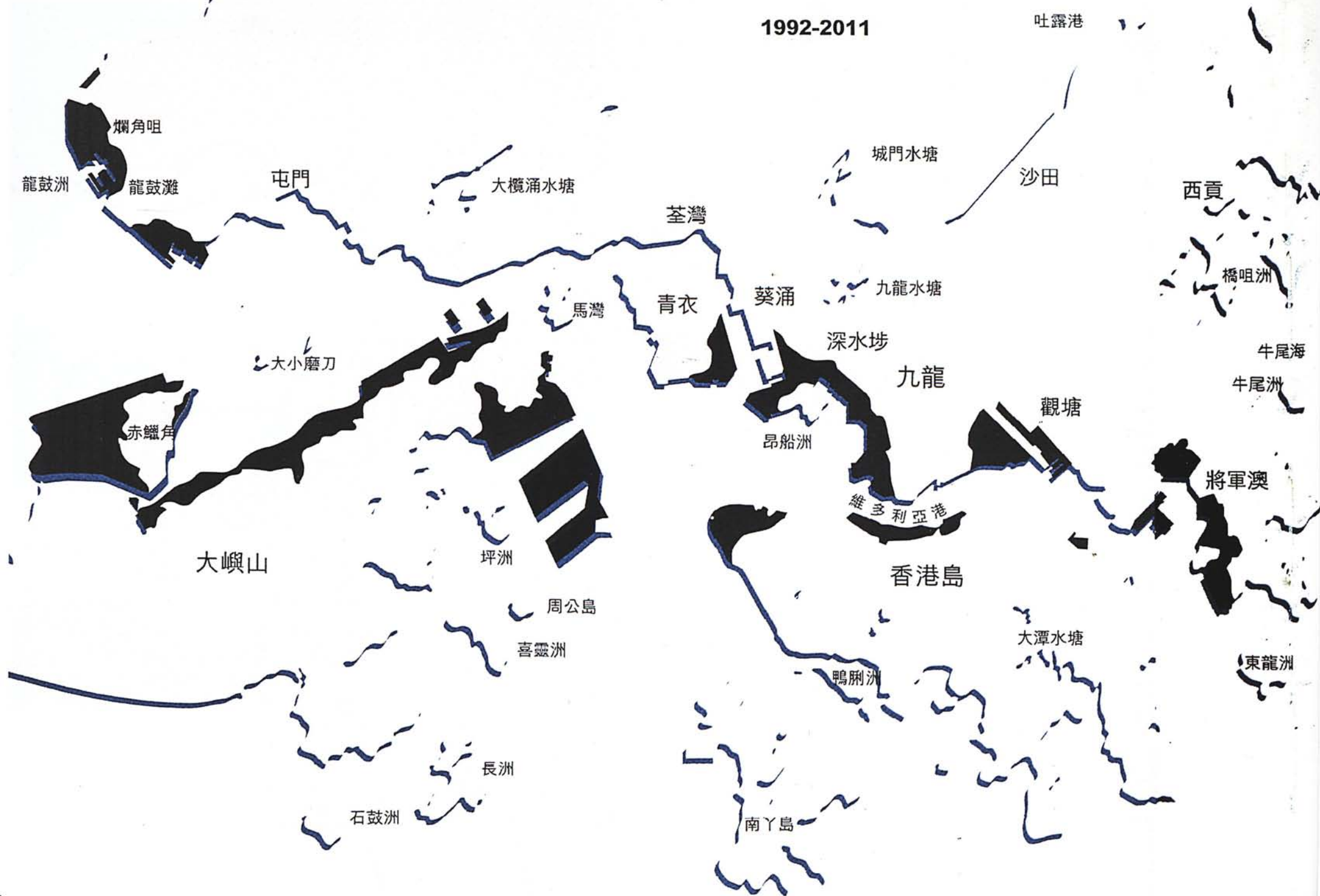
Habitable means that a place is suitable for habitation or is capable of being lived in.

c. Habitable Waterfront



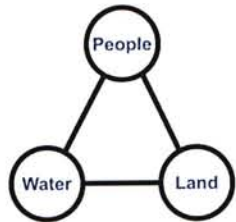
“Habitable waterfront” is about how a waterfront could be suitable for people’s habitation. And waterfront means the interface zone of land and water, then habitable waterfront, simply and no doubly, has to do with the relationship between human, water and land.

吐露港

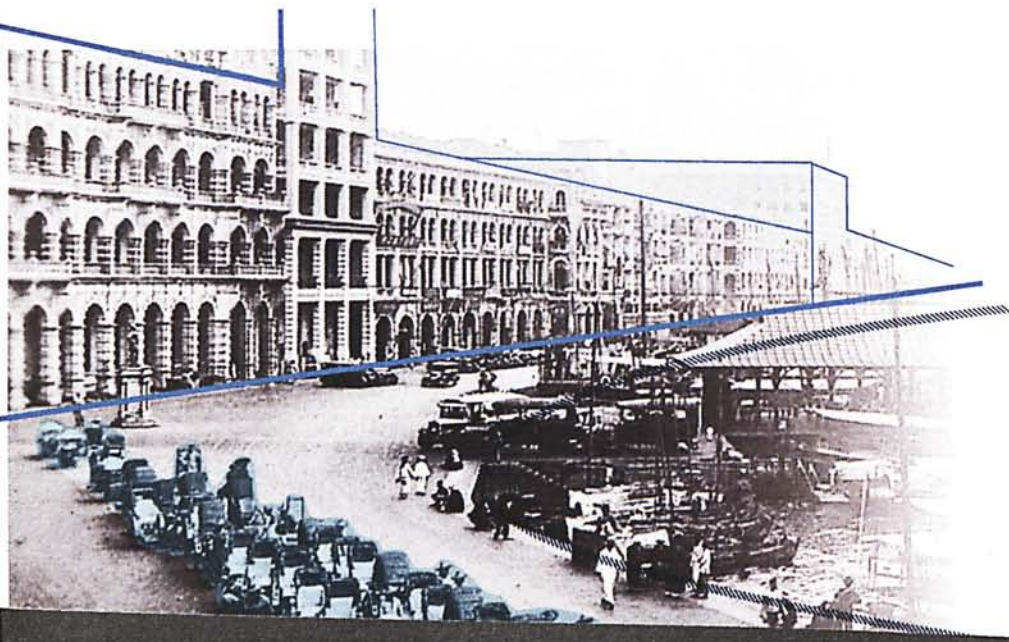


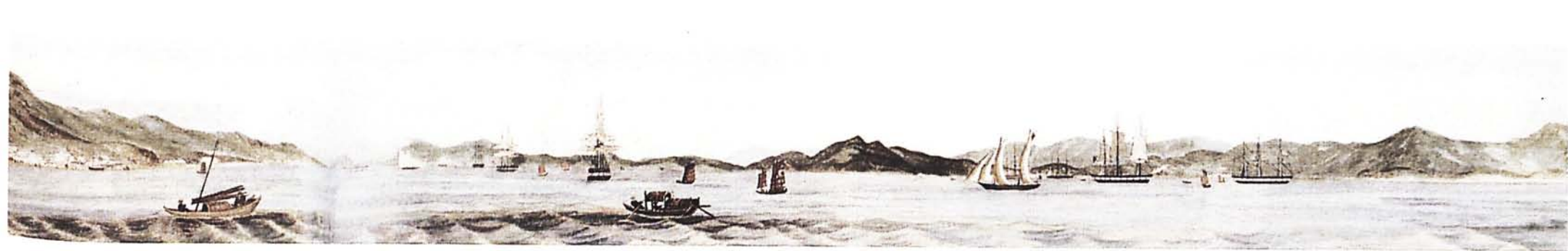
2.0 Hong Kong Waterfront Development

2.1 Hong Kong Traditional Habitable Waterfront

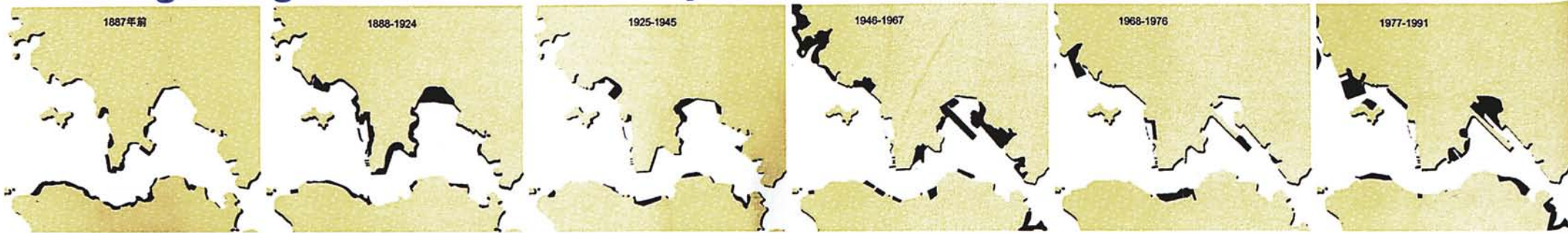


People **lived** and **worked** both in land-side and water-side of waterfront and even at the edge.





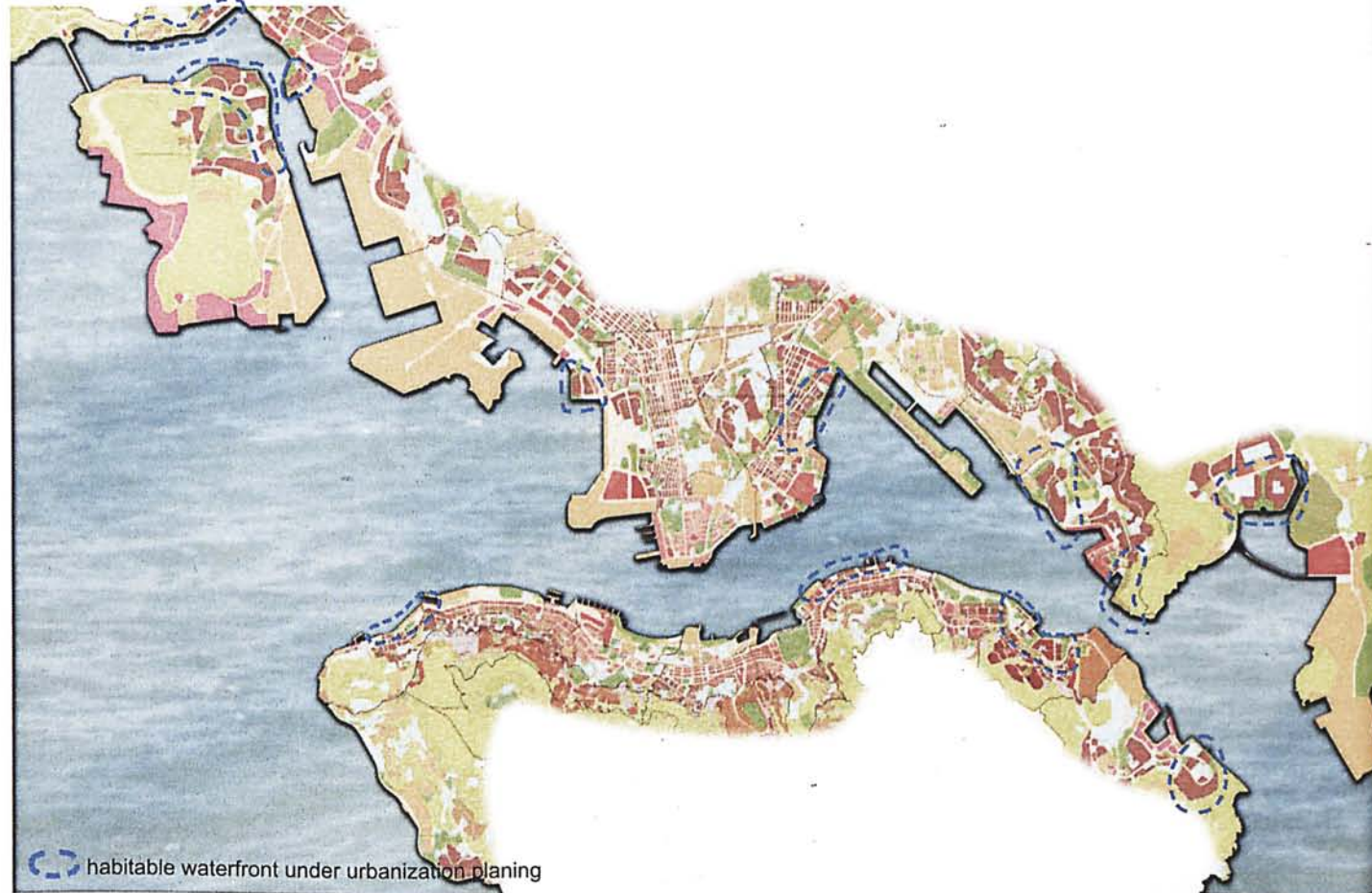
2.2 Hong Kong Waterfront Nowadays and criticism



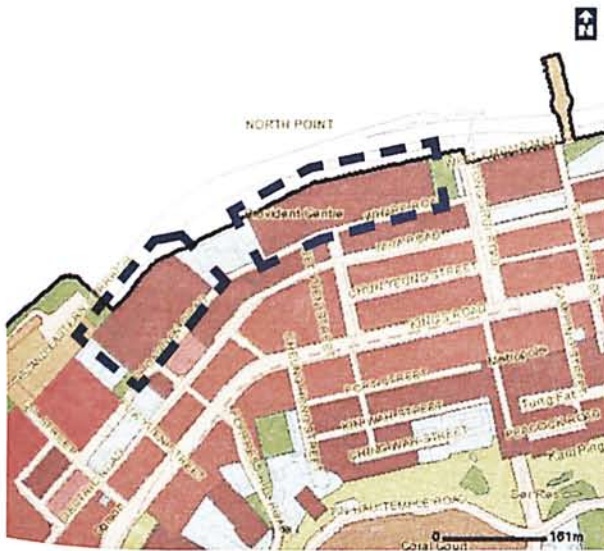
The transformation of Hong Kong in times of accelerated economic development has led to the disappearance of many historic and traditional residential districts. The increase of population, growing needs for organized transportation, commercial space and recreational areas, have created a shortage of land. Meanwhile, the growing number of international visitors, and the increasing interest in traditional Hong Kong (Chinese) culture have raised the question of the balance between urban conservation and development.

To Hong Kong, as a historical harbour city without enough flat land, the development inevitably results in reclamation. However, this continual action since 18dc not only physically shortened the distance of the harbour, more importantly, it widens the distance between people and the water.

OZP showing villages and residential planning at waterfront area



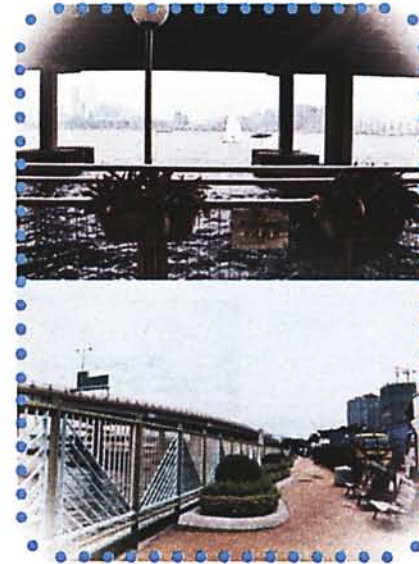
Living conditions of newly planed “habitable waterfront”



Waterfront zoned as residence development that is privatize to some extent



residence to enjoy only



the public waterfront does not welcome public enjoyment



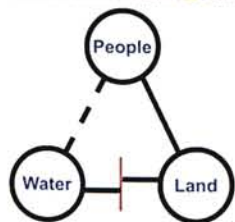
the water level is always vertically drop a certain distance from the walkway



政府於一九九七年六月三十日頒佈了《海港保護條例》，並於一九九九年十二月二日頒佈《海港保護（修訂）條例（一九九九）》。根據這些“海港條例”的規定，必須把海港視為一項特別的公共財產和天然遺產來加以保護和保存，並須以不在海港進行填海作為前題。

North Point Waterfront

No fishing, no touching water are allowed at North Point waterfront. Only viewing is permitted and carpark occupies most of the waterfront space. However, the **mega infrastructure** even break the viewing to water.



in-between space
view waterfront



fishing not
allowed



no more stand-
ing space



unwanted
space?



car-park
again

strip-like
resting place



park



car parking



sitting on the
water edge



bus and ferry
terminal

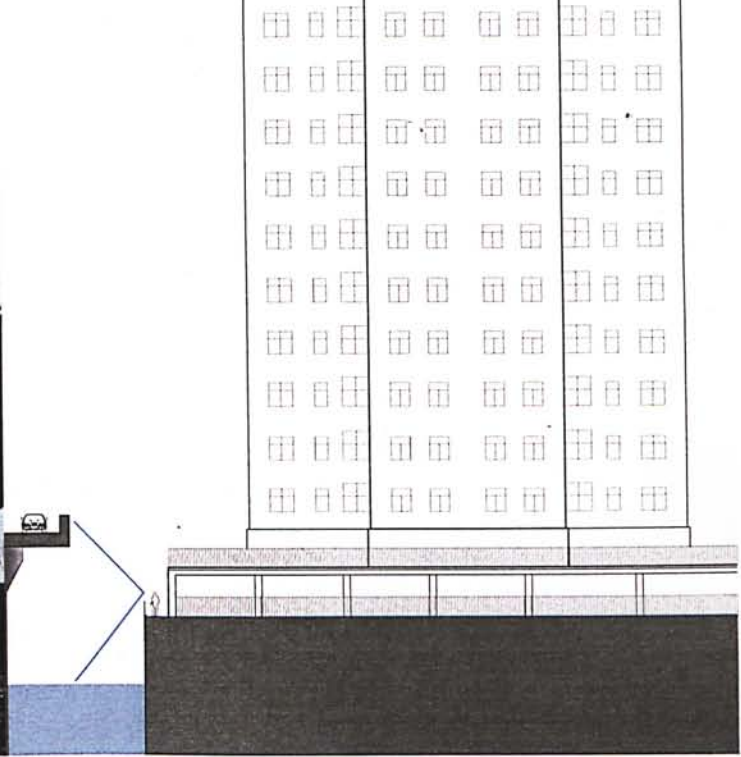
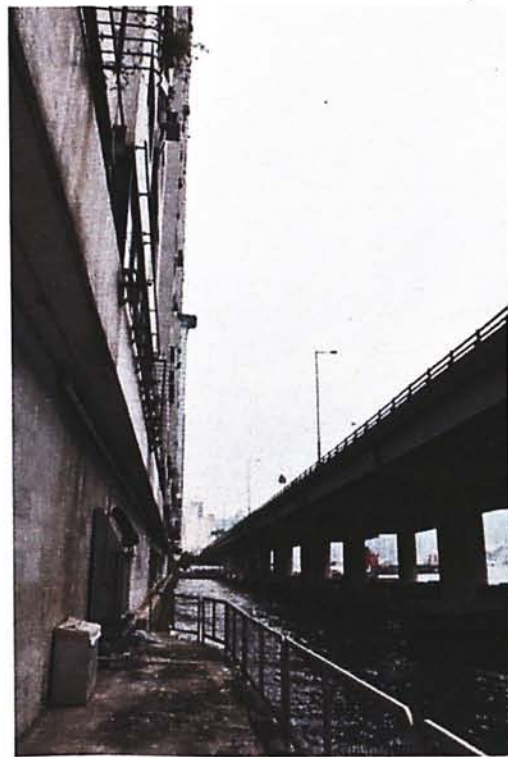
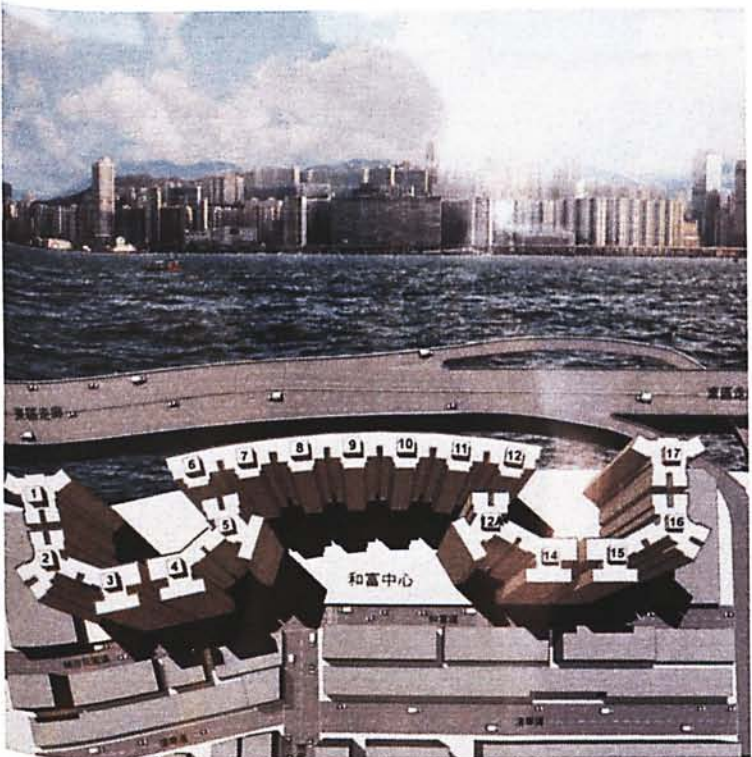
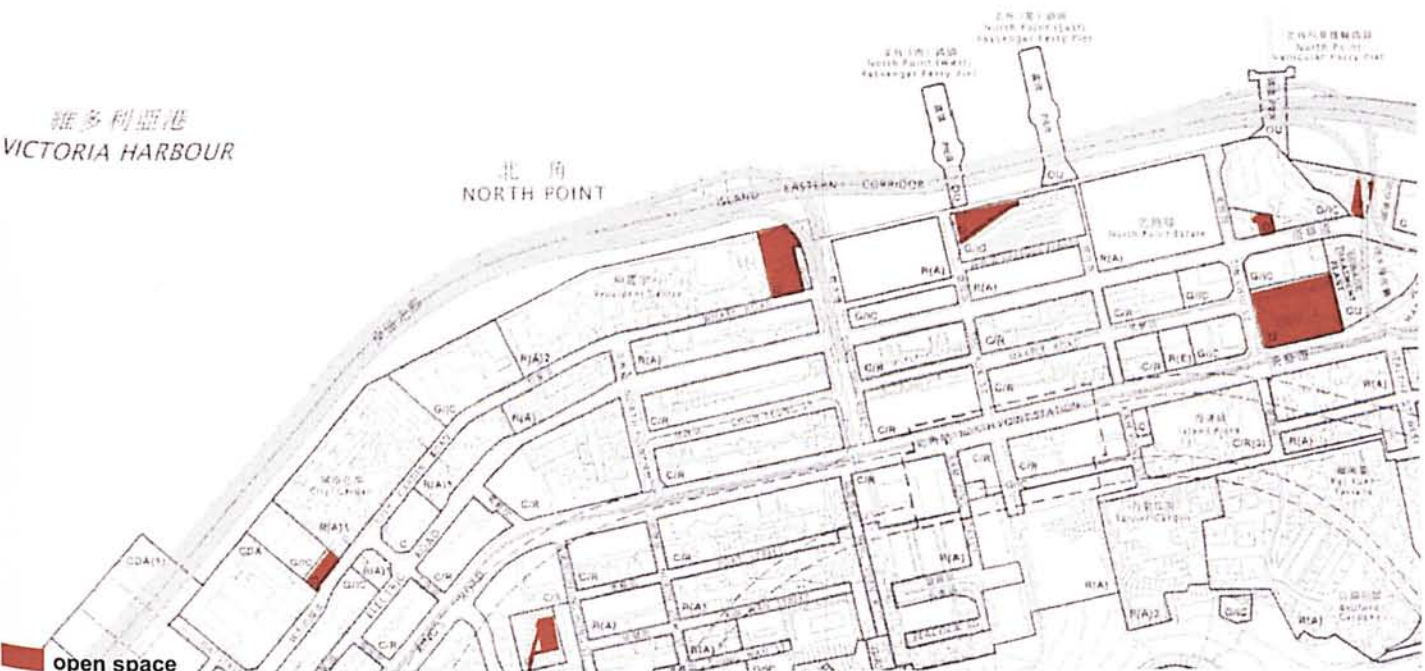


highway acrossing
the waterfront



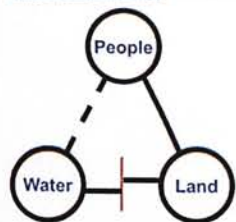
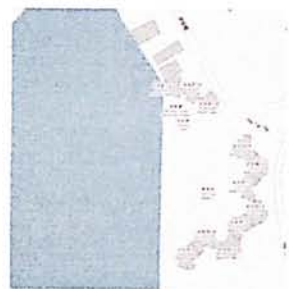
waterfront area
highway

維多利亞港
VICTORIA HARBOUR



The Hampton Place Waterfront

The waterfront attaching to The Hampton Place is claimed as **private** space that no public activity takes place there. Residence buy the flats for the **sea view** only.



residence to enjoy only

fishing beside the Hampton Place

narrow walkway at waterfront

park opened to public

ONE SILVERSEA
This area is open to public
此範圍開放給公眾使用
Customer Service Centre 客戶服務中心
2140 2948

waterfront area

industry terminal

working site

fence far away from waterfront

waterfront

no photo in private place

park for public

fence on boundary

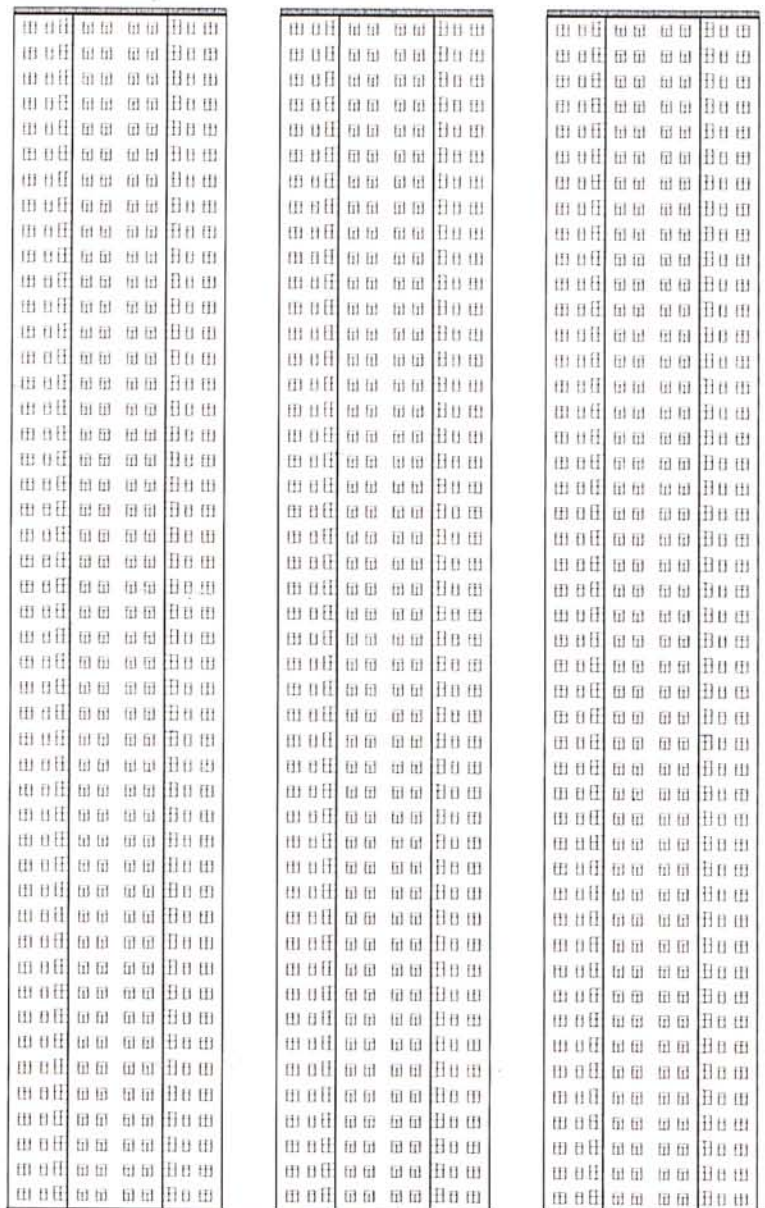
enclosed greenary for residence only

signal of prohibition for entry

high-way settlement next to waterfront

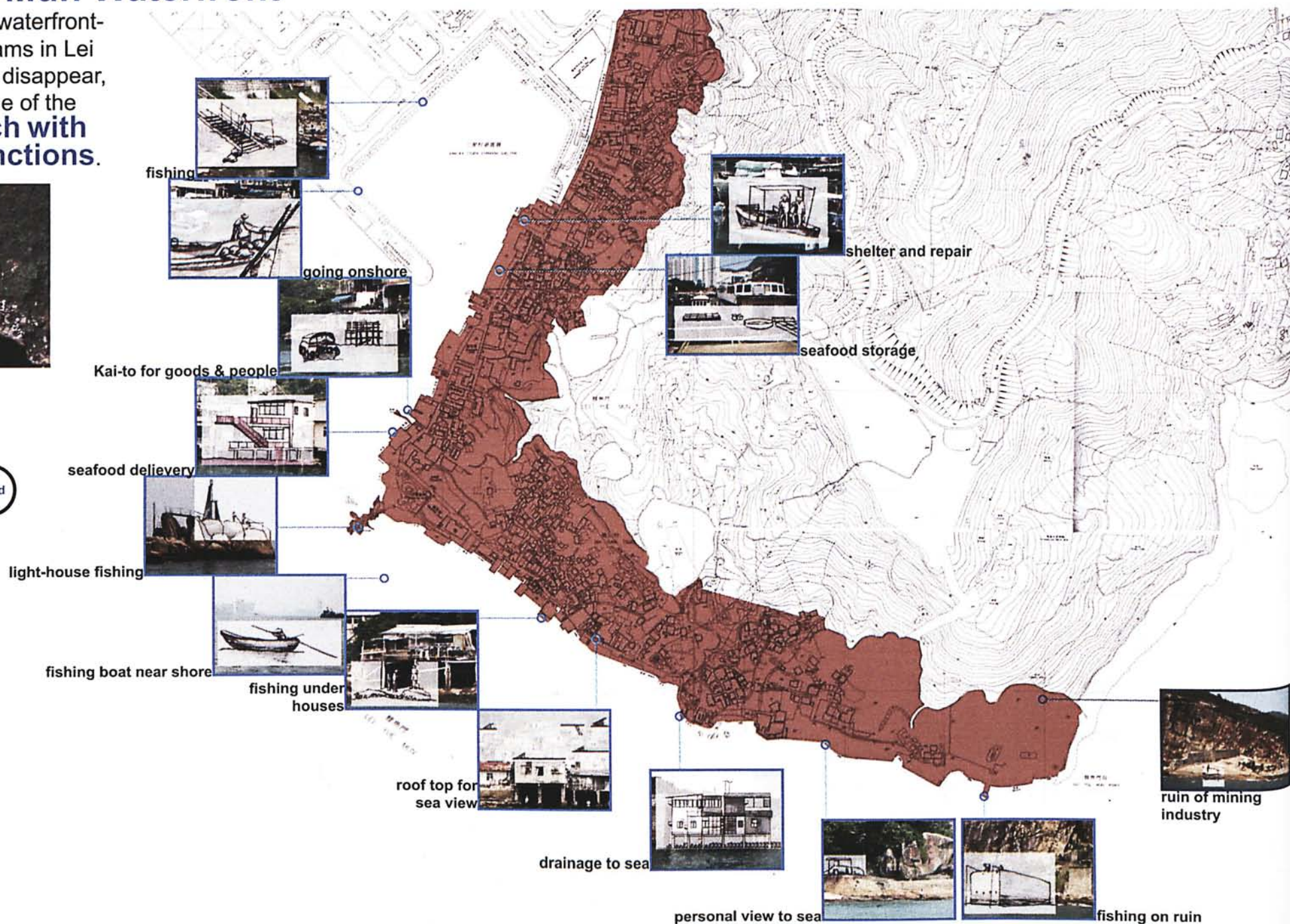
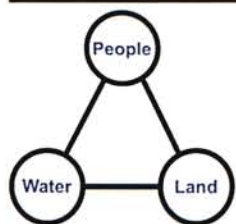
green space?



high-way development prior to pedestrian



Lei Yue Mun Waterfront

Although the waterfront-related programs in Lei Yue Mun had disappear, the water-edge of the site is still **rich with varied functions**.

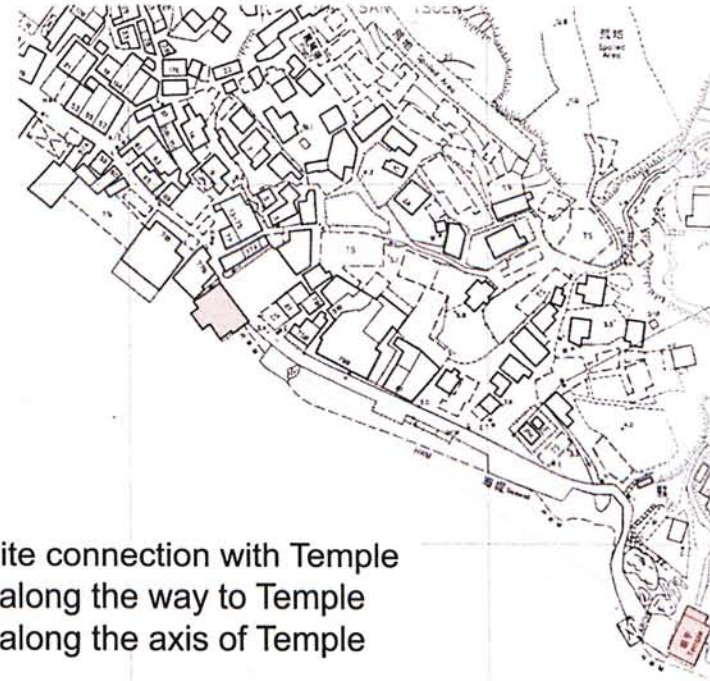


 nowadays function
 historical function

Structure of village house in Lei Yue Mun



3 side-elevations have contact with public circulation

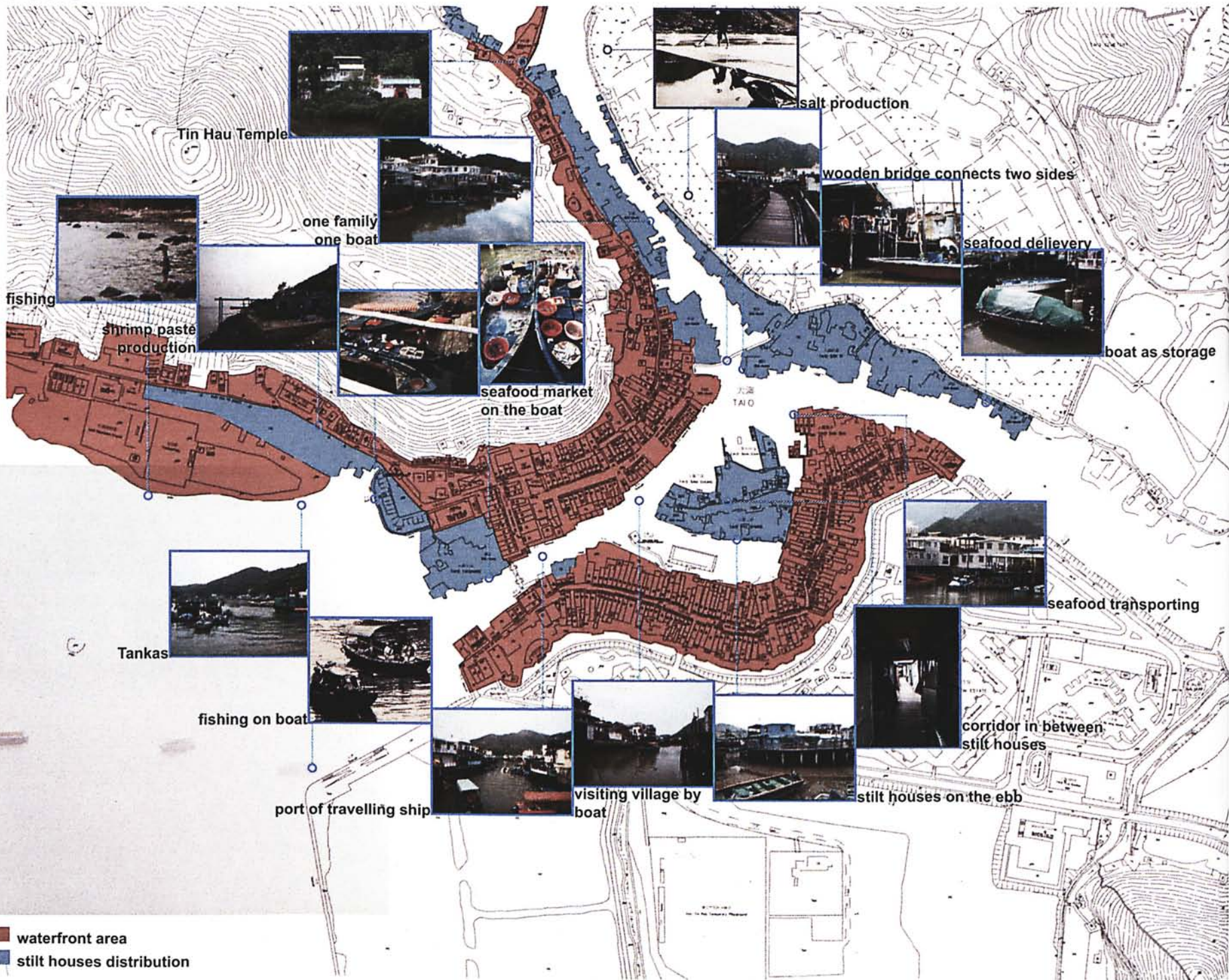
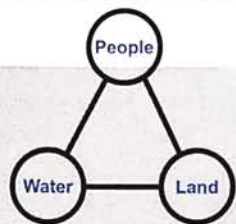


Site connection with Temple
- along the way to Temple
- along the axis of Temple



Tai O Waterfront

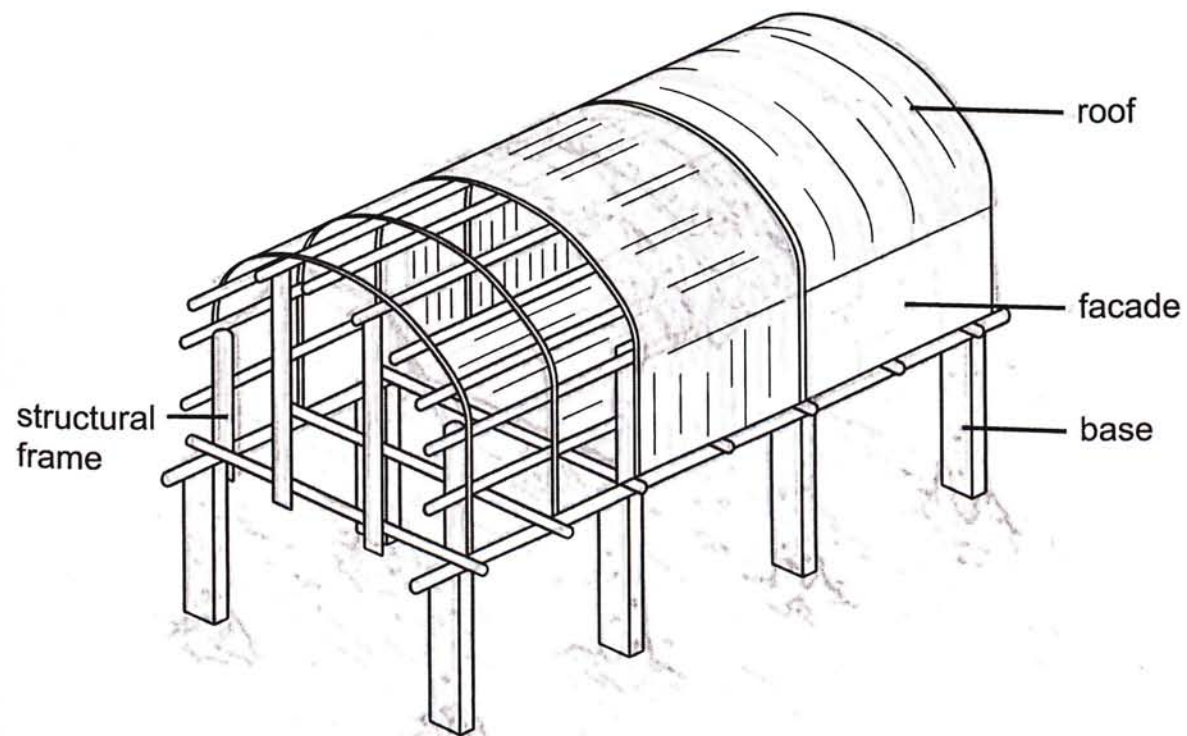
Nowadays, fishing and production of fish-related-products, such as salt-fish and shrimp paste is the main **economic activities** in Tai O.



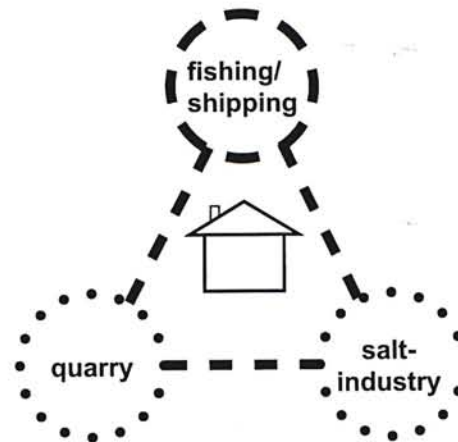
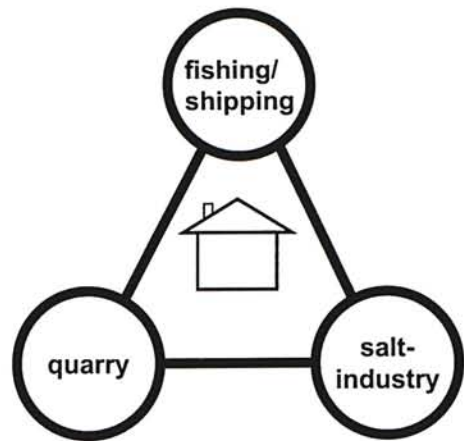
Structure of stilt house in Lei Yue Mun



Stilt House, created by the fishermen long time ago, is the icon of Tai O. It is convenient for the fishermen to due with their daily work and living conditions.



2.3 Argument



The waterfront related industries has been declining, do people still live at waterfront?



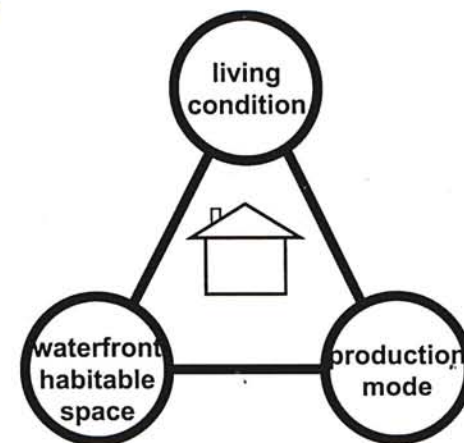
The increase of population, growing transportation, commercial space and recreation created a shortage of land. The continuing result in the disappearance most of the waterfront.



organized trans-
areas, have crea-
tion since 1992
nal habitable wa-



Living at waterfront becomes a symbol of luxury life and the public realm is sacrificed. Then is it necessary to live at waterfront?





3.0 Precedents within architecture

3.1 Amsterdam Waterfront

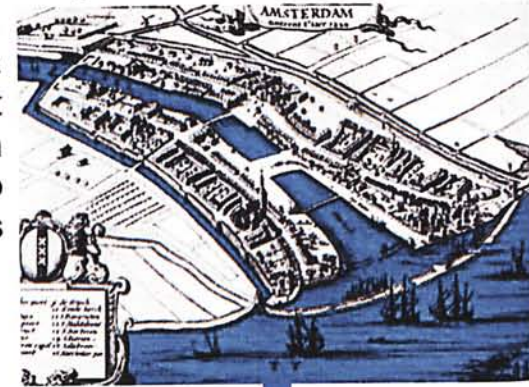


Amsterdam and water have been intimately linked for centuries. It was precisely because of all that water from the **Rivers Amstel and IJ**. The water did not only provide them with 'daily bread'; it was also the greatest enemy of the first Amsterdammers.

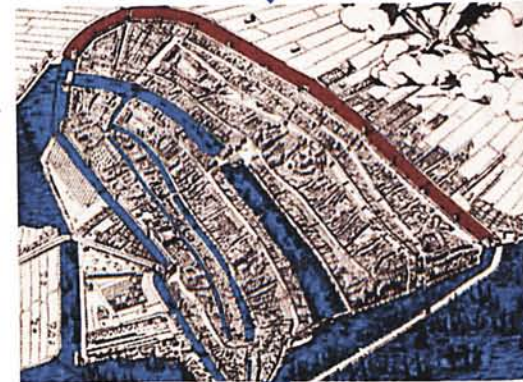
Amsterdam has more than **160 canals** within the city, with a total length of 75 kilometers. Some traditional great events such as SAIL AMSTERDAM also take place on or around the harbour and attract thousands of millions of visitors every year.

City Development

Early to around 1200, Amsterdam is only a fishing and trading port situated at the mouth of the river Amstel, to which the city owes its name.

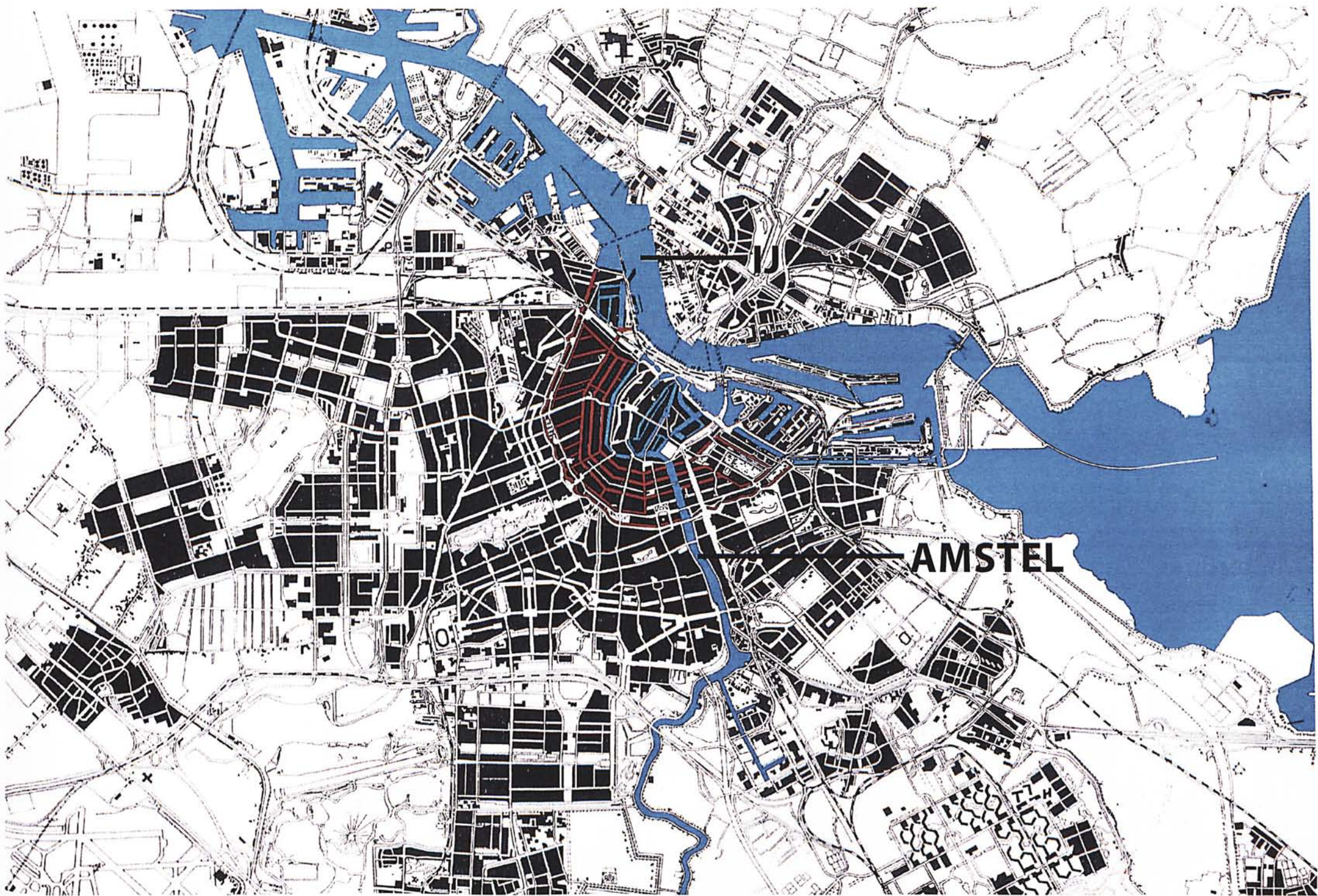


The oldest canals were originally intended to protect the city against unwanted visitors.

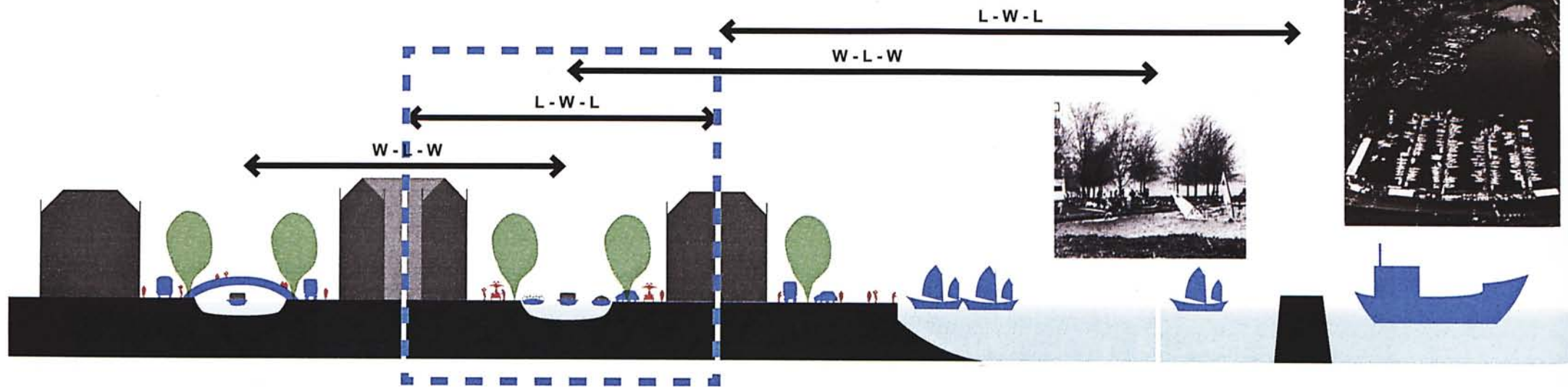


The city edge expanded for its rapid population growth that the canals were repeatedly moved outward as long as to channelize water and benefit to shipping.

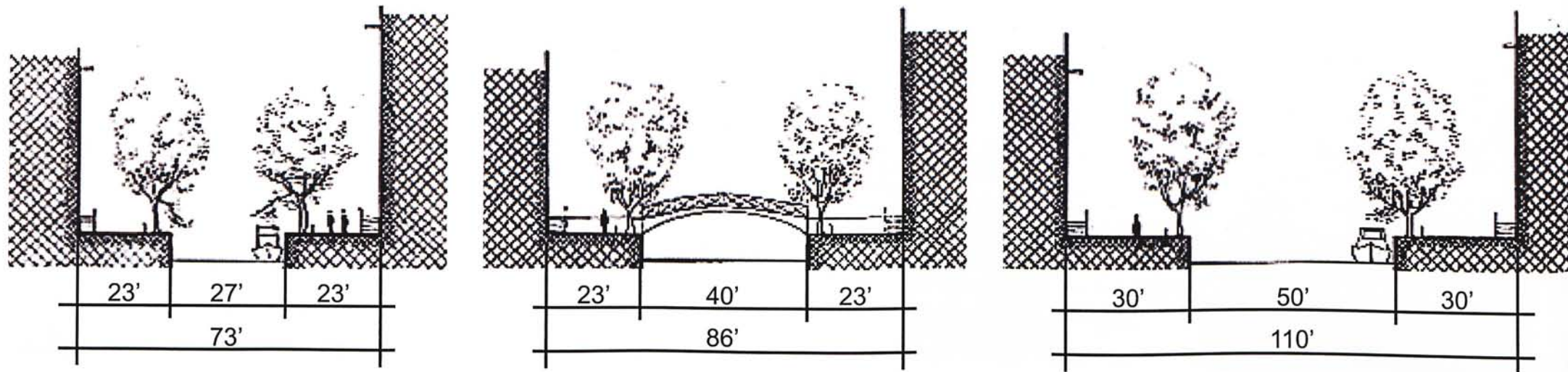


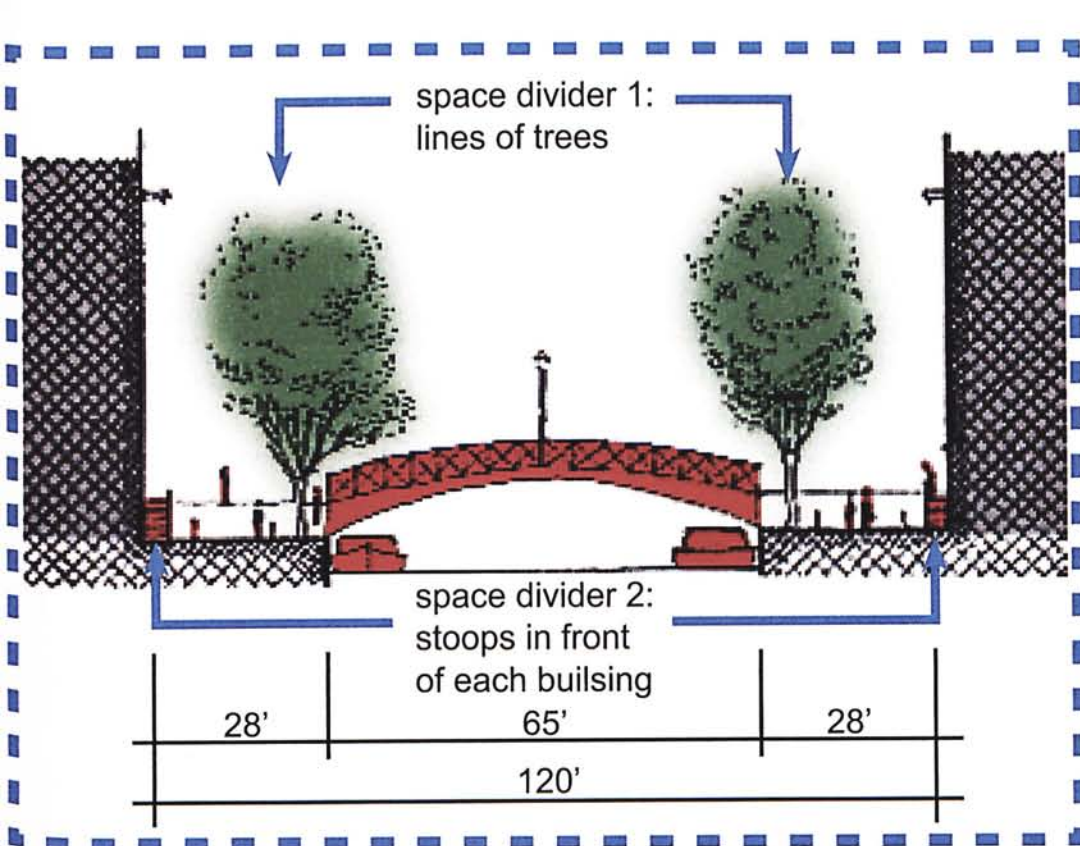


Water-Land Relationship



Amsterdam "Streets"



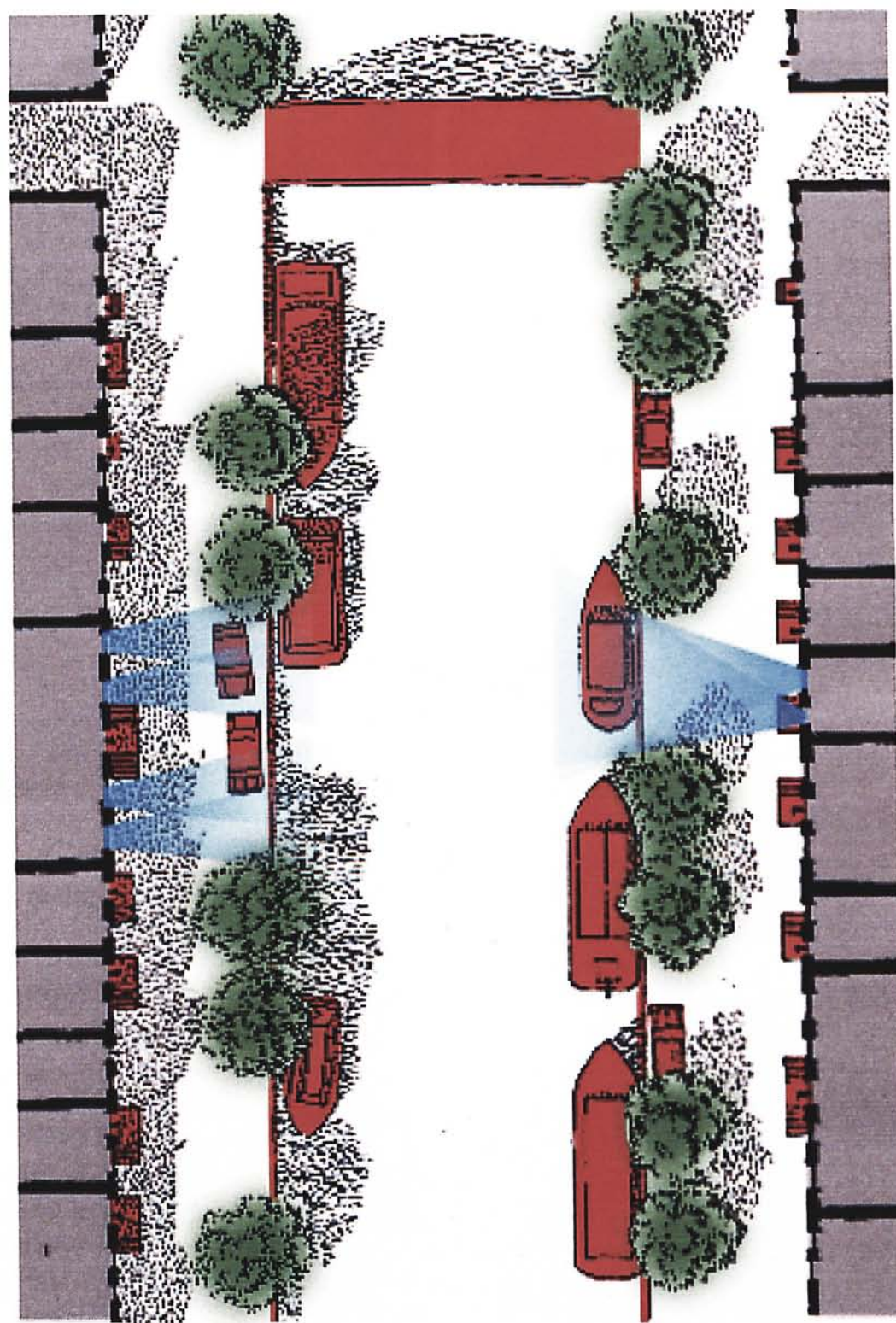


Even the narrower canal streets are wide compared to many residential streets in the United States -- Achterburgwal in the centre is about 75 feet and Looiersgracht is about 86 feet -- but are experienced as narrow and tightly defined.

Trees along the narrower canals are generally closer (20 feet) than on the wider, circular canals (often over 43 feet). Tree canopies sometimes meet over the narrow canals.

Many physical details contribute to a sense of inhabitation along the canals, especially the smaller ones: many doors (often more than one per building), stoops, many windows, window boxes with flowers, benches at corners, inhabited and individualized barges and houseboats.

The smaller canals are more compelling as potential places to live than the larger ones.



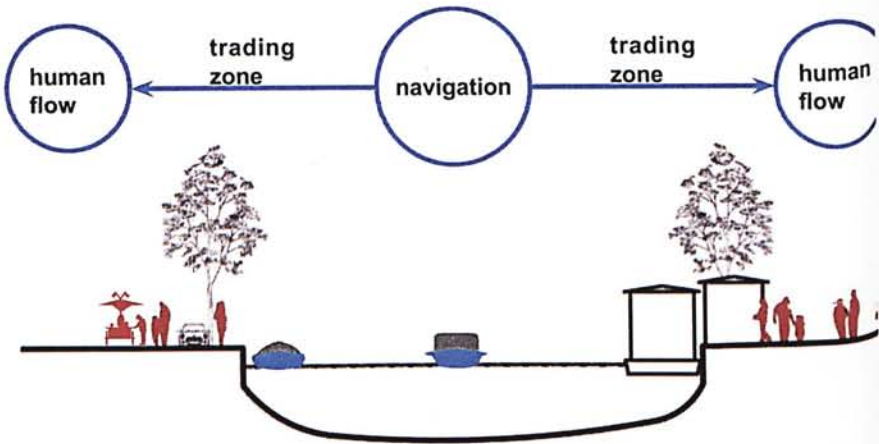
Flower Market Floating at Shoreline



This whole country is really famous for its flowers, and specifically for its tulips, so it should come as no surprise that one of the most popular free things in Amsterdam is a stroll down the block-long flower market, which is officially called by its Dutch name of Bloemenmarkt in many places.

It's usually billed as the "world's only floating flower market" but don't get your hopes up in that regard because the only things that are really floating are the houseboats behind the stalls, and even then you'll only know that when you look behind them like in this photo to the left.

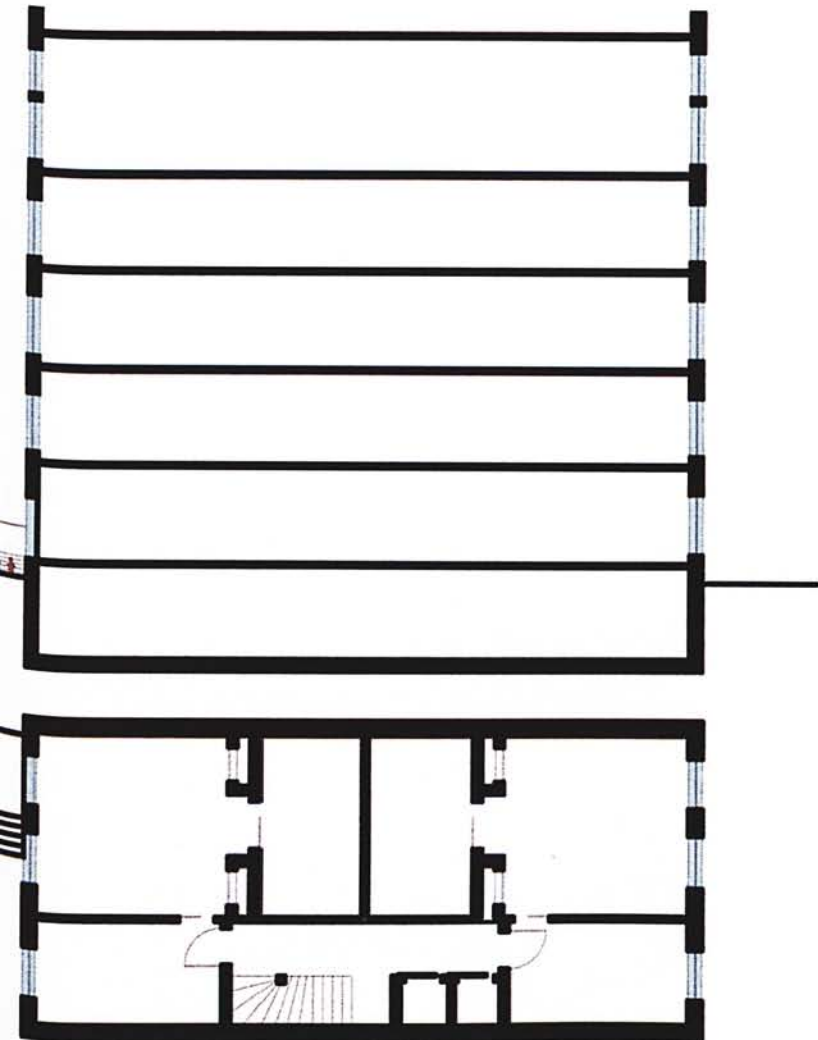
There are 15 stalls and each of them is quite similar unless you are a true flower aficionado. It's open all year, but of course the offerings of live flowers and plants are seasonal. This is a reasonably mild climate so you'll always find a good selection, along with bulbs, seeds, accessories, souvenirs, and everything else related to the flower trade for both tourists and locals.



Dutch Houses

Buildings in Amsterdam are generally three to five tall stories plus high, sloping roof areas. There is more brick than other materials.

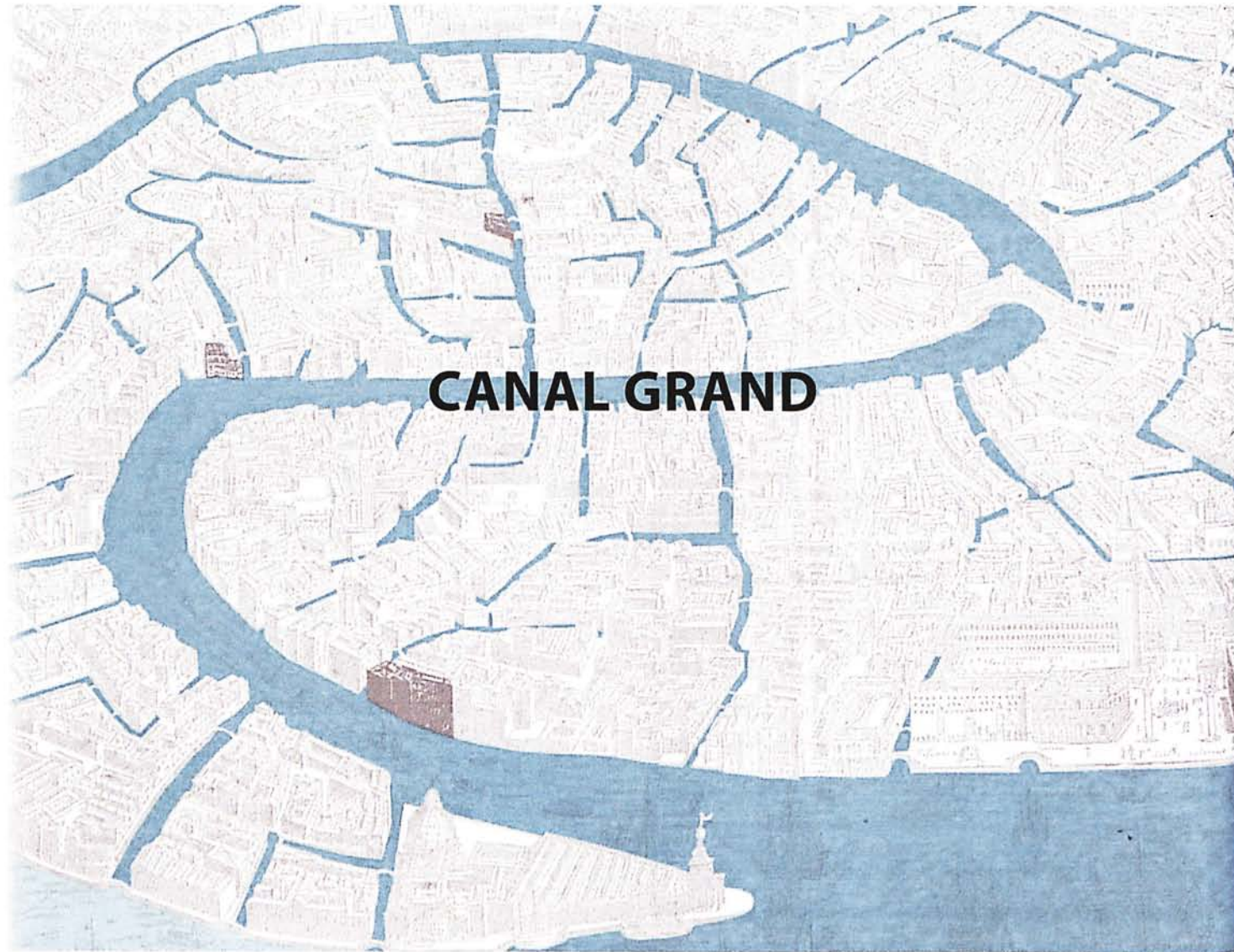
Buildings are generally narrow, emphasizing verticality and height: an average of 20 feet wide on Achterburgwal, for example, and 21 feet on the wider Prinsengracht. Newer buildings tend to be wider.



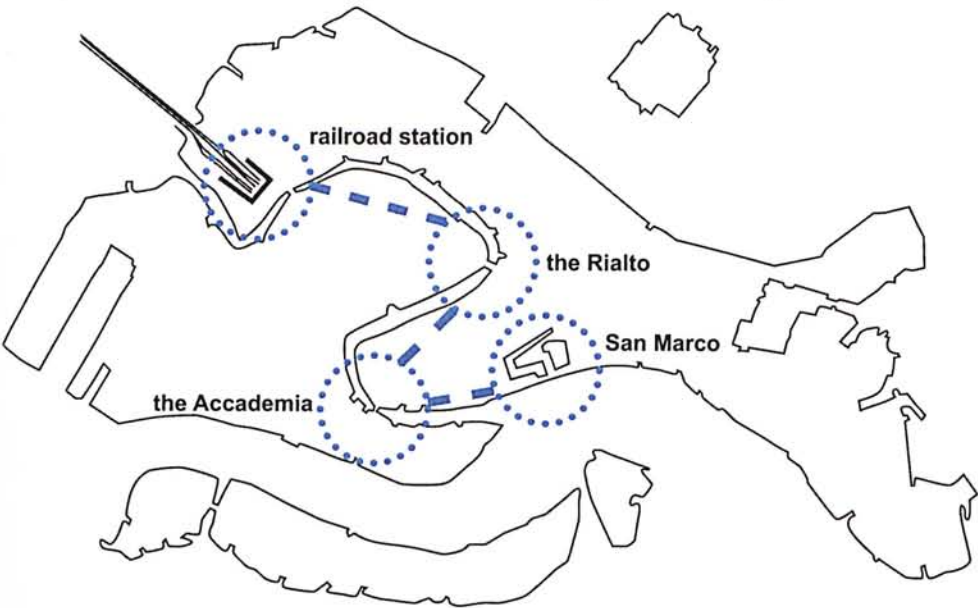
3.2 Venice



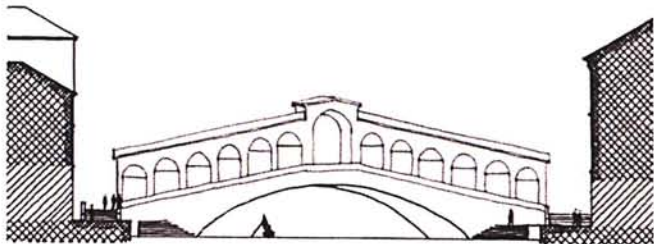
The city is crisscrossed by **hundreds of waterways** called "rii" (plural of rio). The fact that these picturesque canals are all different lends them a special charm. The Rii are **busy thorough for barges and cargo vessels**. However, the developing city had to adapt to the particular terrain on which it was built: sand and water.



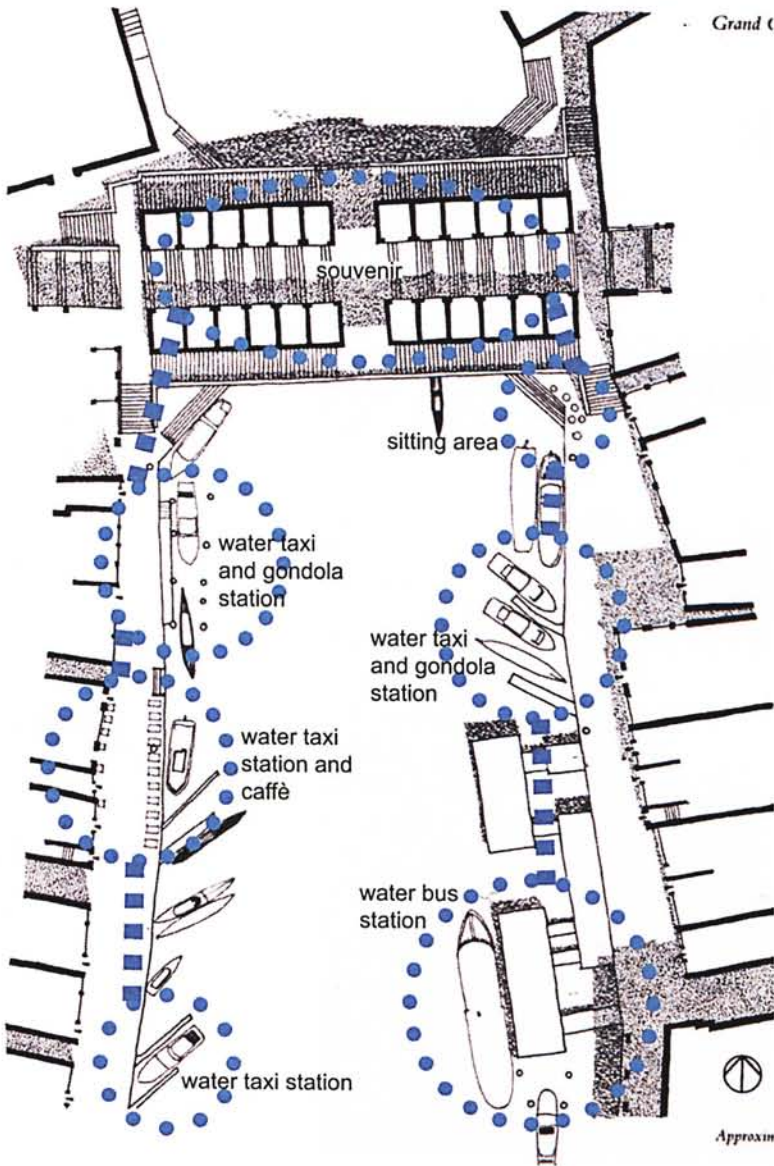
City - relationship between public space and water



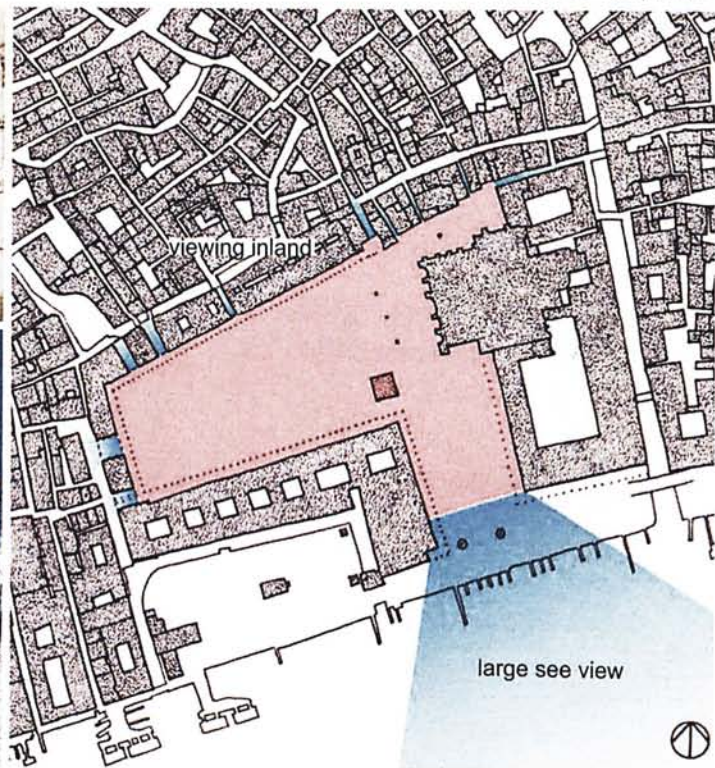
Rialto Bridge



Grand Canal

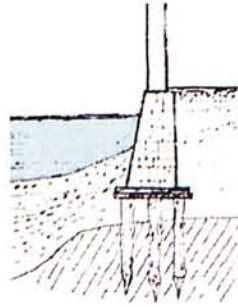


St. Marco Square

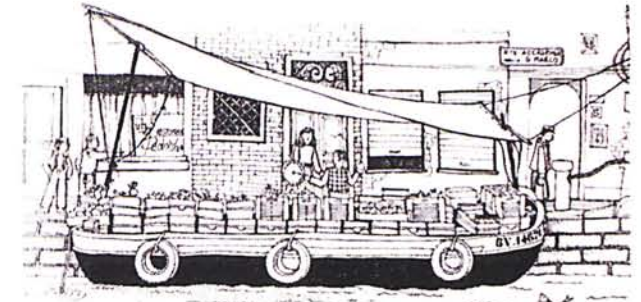
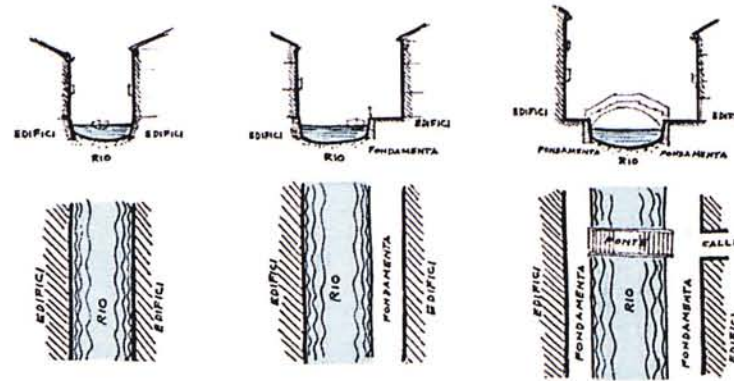


Street - relationship between land and water

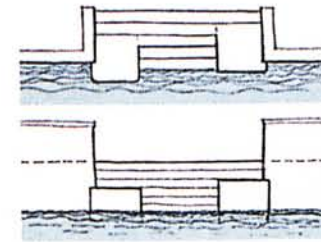
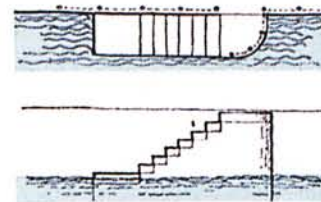
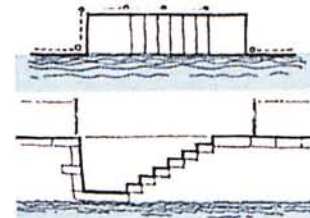
a) **Foundations:** main walls are build on blocks of stone resting on wooden platforms supported by piles driven down into the mud - all below sea level.



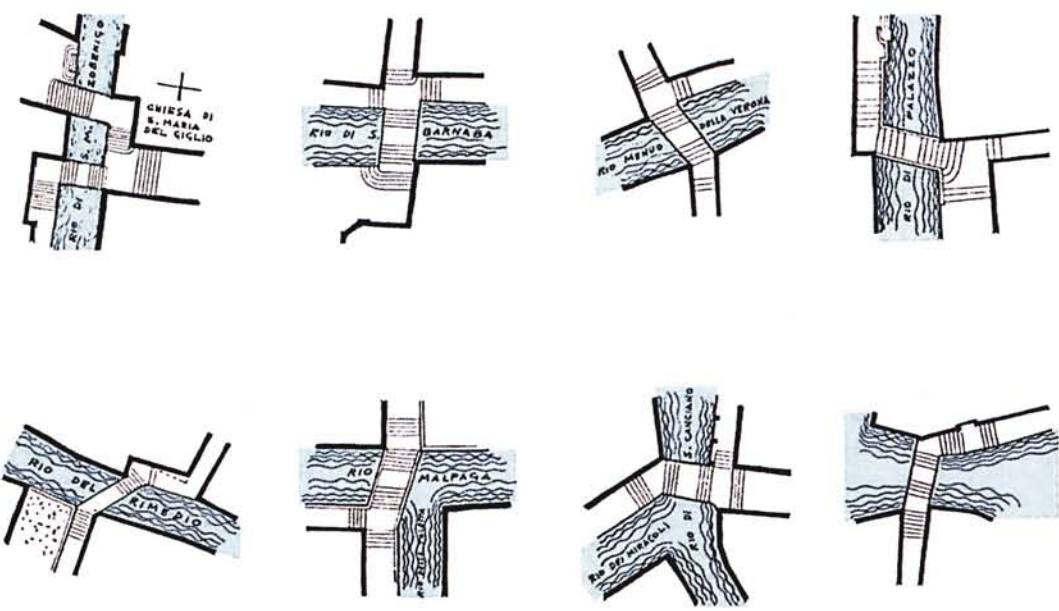
b) <<Rii>>, small canals, can have <<fondamente>> - quaysides - on one or both sides. And different activities always take place on boat along these fondamente.



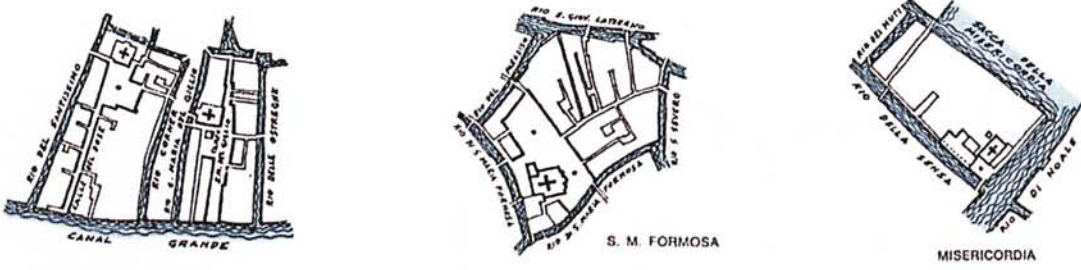
c) **Water steps** for boats are variously designed parallel or perpendicular to the canal, protruding into the water or set back, to that there is always one step at the right level, despite the changing tide. There sometimes a large step to let activity happen there.



d) **Bridges** are of various shapes and sizes, according to the layout of the streets leading to them.



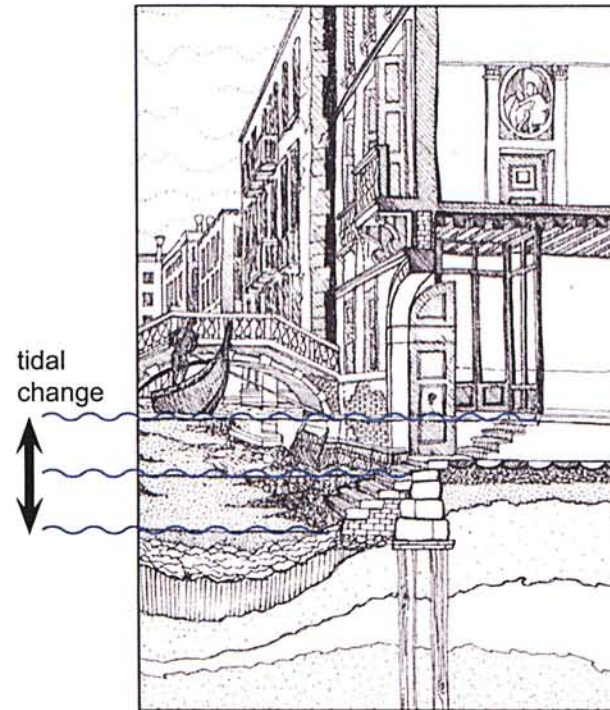
e) **Urban islands:** the city is built on over a hundred islands; these often form autonomous units, almost villages, each with its parish church, its village square and main buildings. Different scale of canals become the **urban streets** connecting buildings, neighborhoods, and settlements of Venice with each other.



Venetian Houses - relationship between building and water

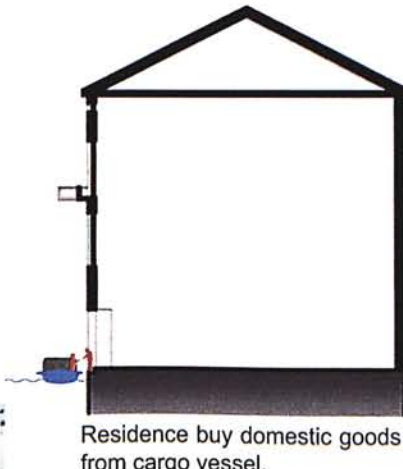
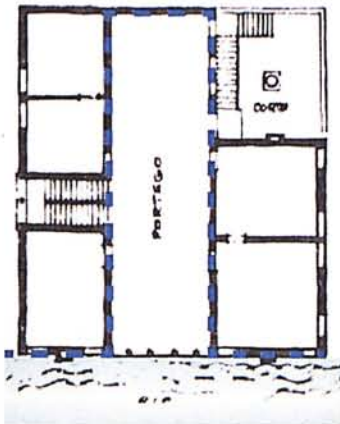


The phenomenon of high tides is such a common experience that the Venetians have come to accept them philosophically, without any big fuss. The water seems to have a special fondness for Piazza San Marco and the church, where it can get more than 11/2 feet deep so that, it is possible to see a gondola navigating on the square or even beneath the arches.



The rising water level and sinking land had brought a big trouble to Venice, especially the living units. Normally, the ground floors of the venetian houses would be abandoned. Nevertheless, there exist different types of building dealing with tidal change. Afterwards, it invented different production modes with water.

type 1



Residence buy domestic goods from cargo vessel.

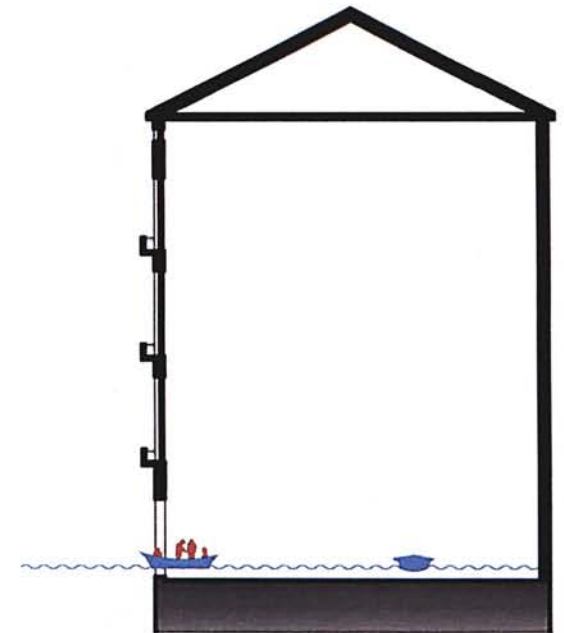
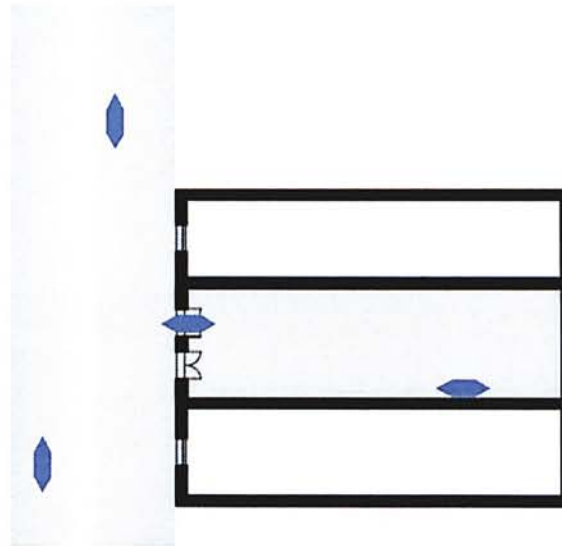
type 2



type 3



Ca' d'Oro (House of Gold)



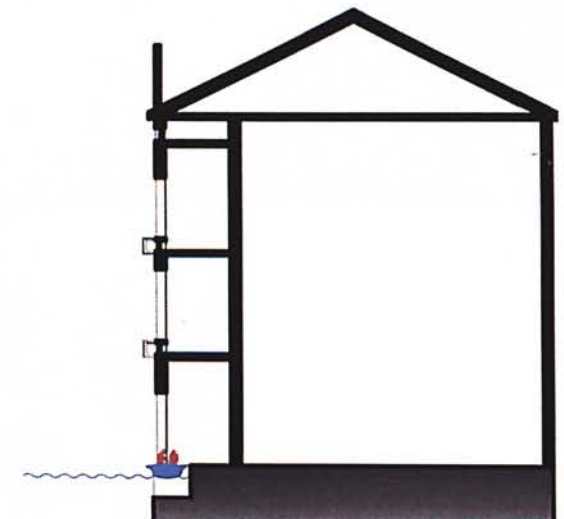
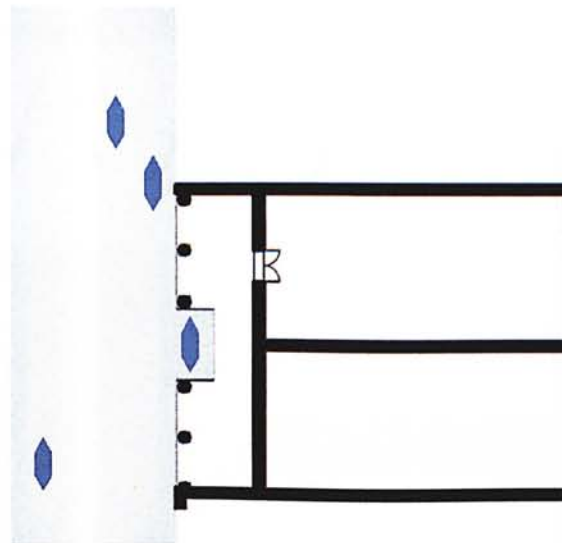
Residences travel by their own boats.



Residences travel by their own boats.

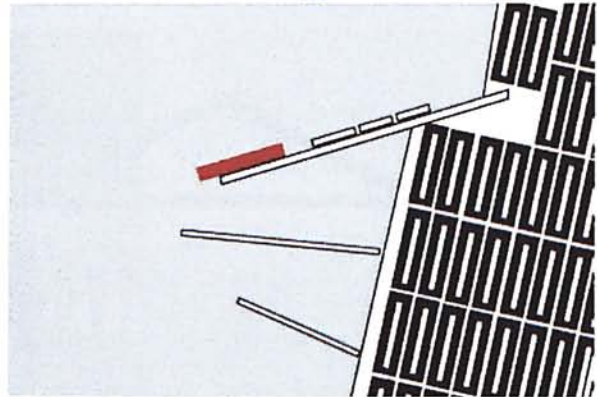


Ca' d'Oro (House of Gold)

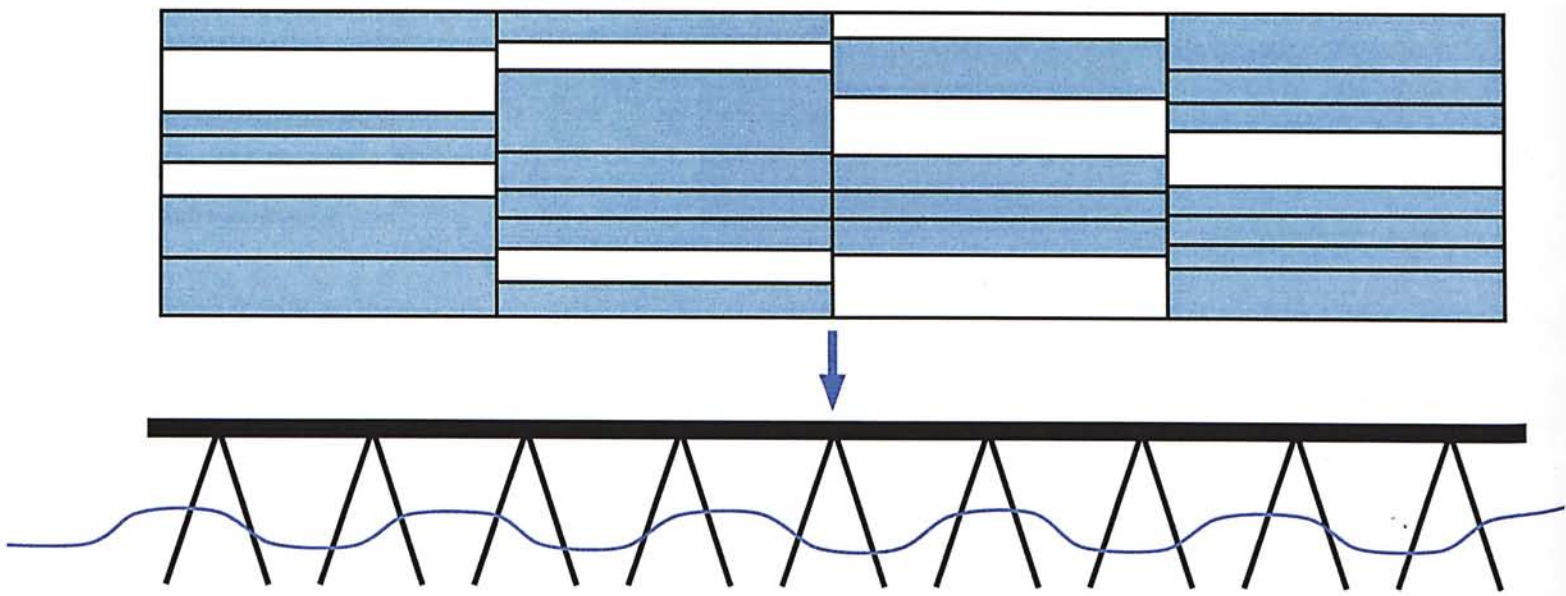


People (both residences and visitors) travel from place to place by public water bus or water taxi

3.3 Housing Silo in Amsterdam



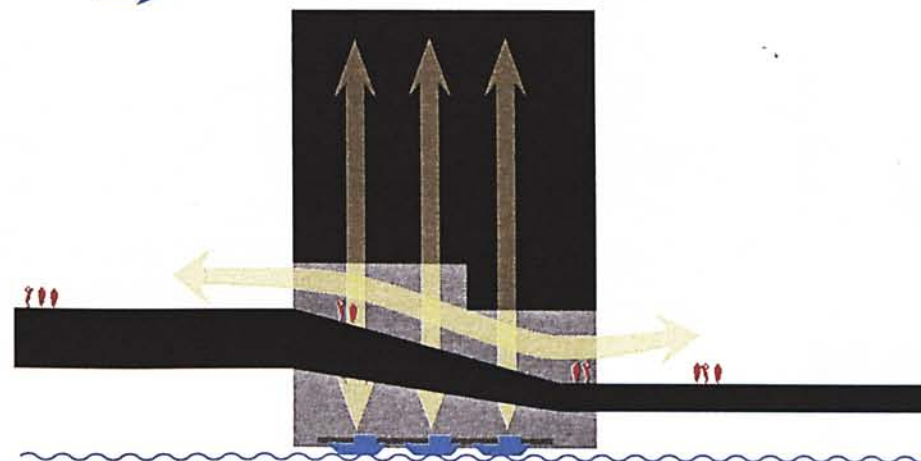
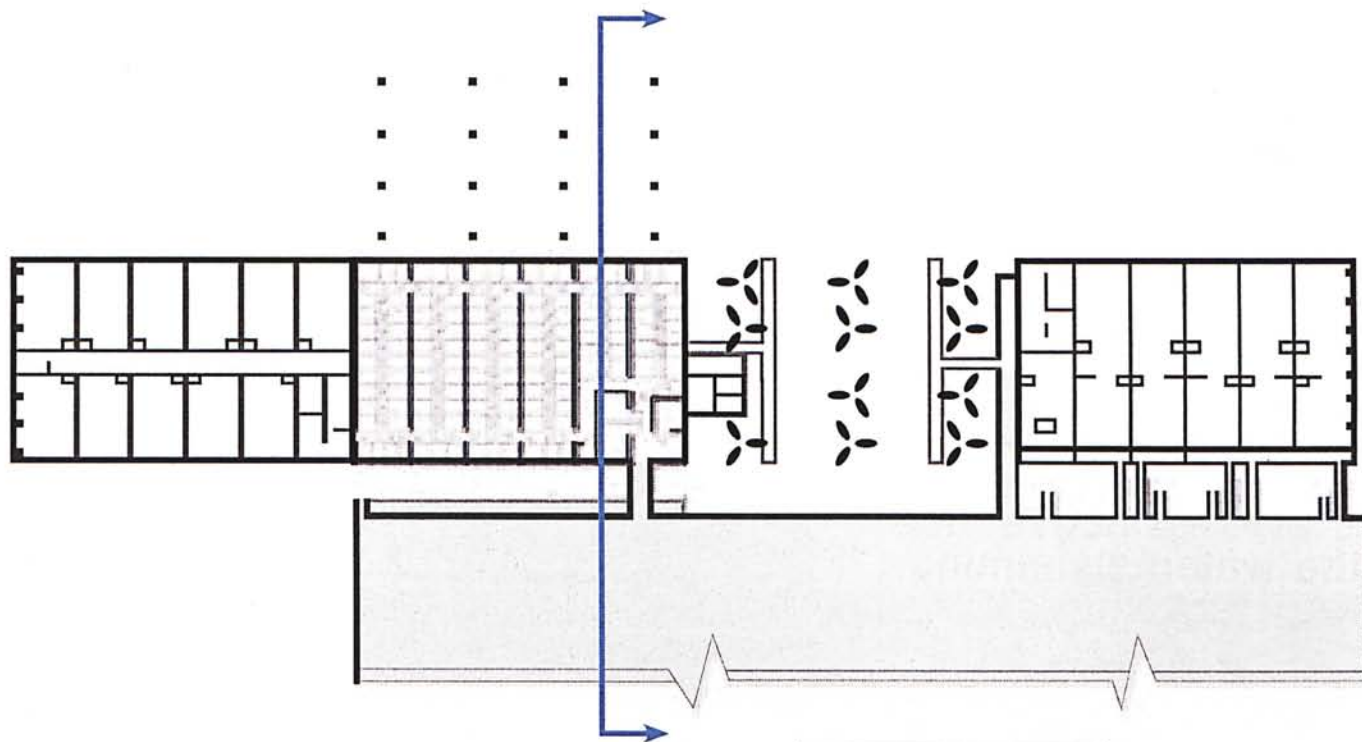
The Housing Silo is situated on the IJ River, at the tip of the pier. It is a primarily residential complex. In addition to 157 homes, the complex contains 600 square meters of commercial space.



Public
Private



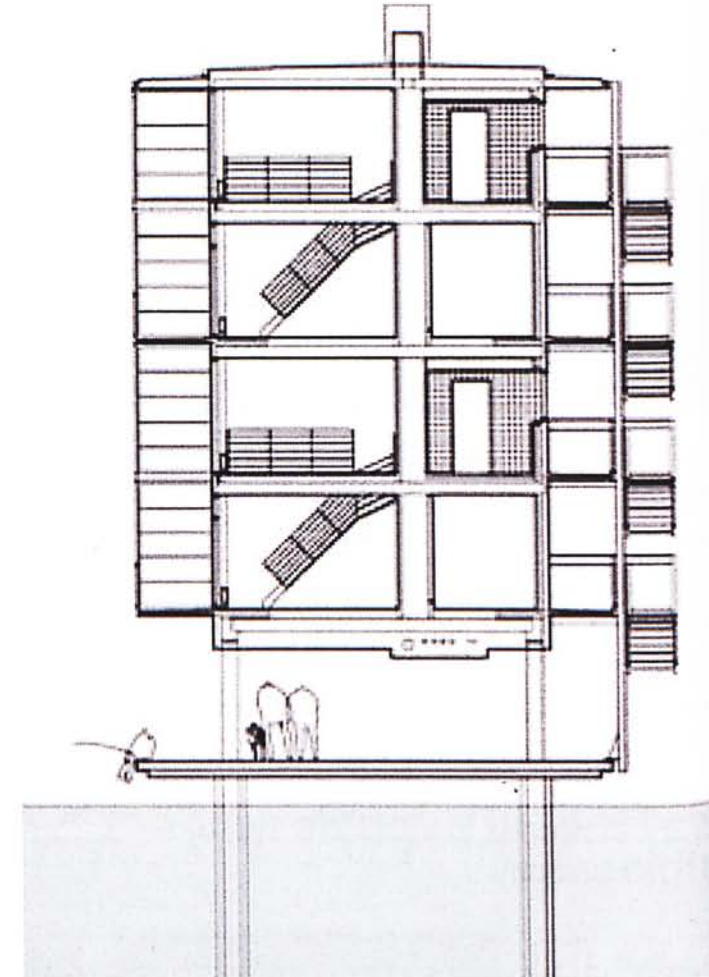
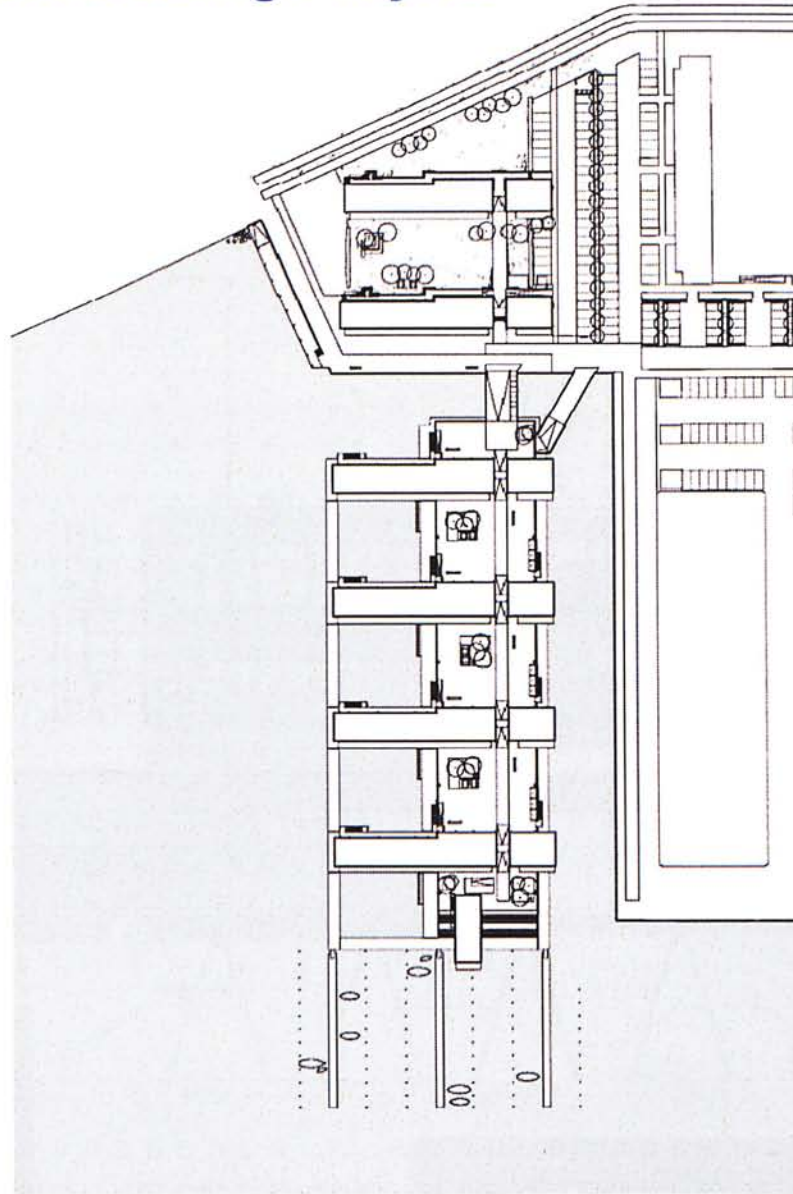
Built on the water, the Silodam building is embedded into the ground of the harbor, using massive pillars. Atop the pillars, the building is based on a "table" of concrete. To address the issue of the **views of the water** from the pier being blocked by the building, the designers penetrated the base of the building with a **wide passageway** that leads to a **public accessible** balcony.

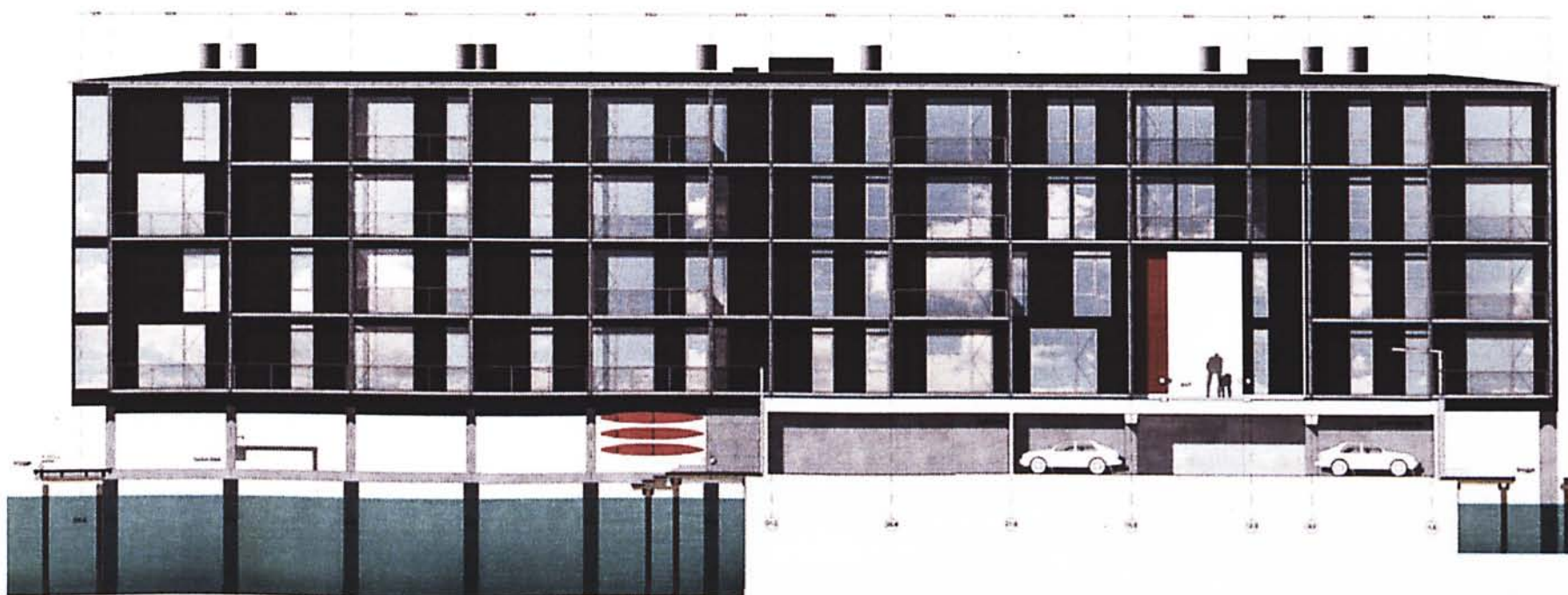
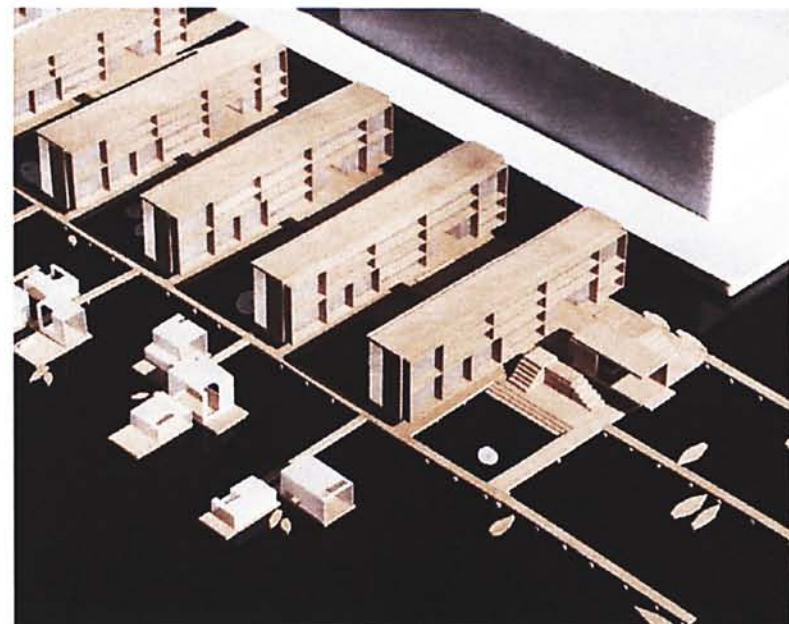


3.4 Copenhagen Harbor Housing Project



The sea-view has become an obsession in real estate, but to this project, looking at the sea is the least interesting and certainly the most passive way to enjoy living near water. It is claimed that the spaces between the houses and the wooden decks around the parking island would encourage **active use of the water, swimming, fishing, kayaking.**



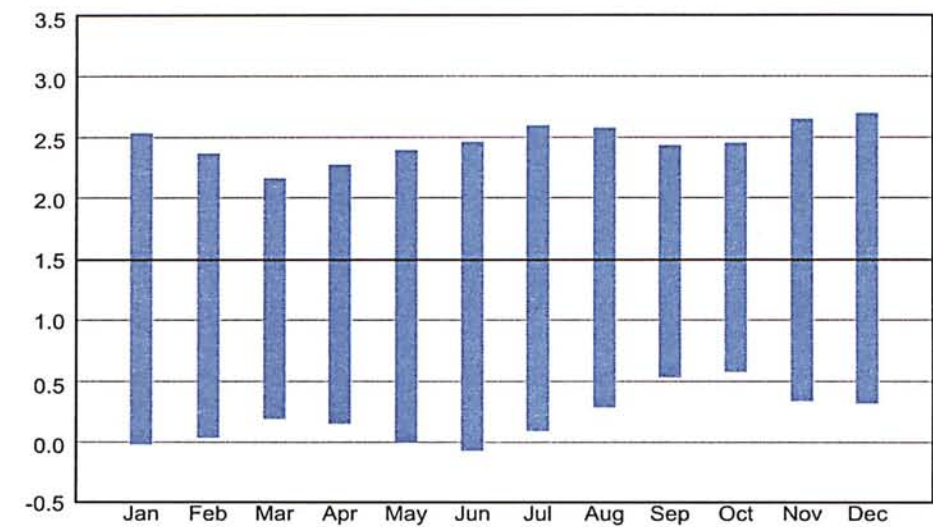




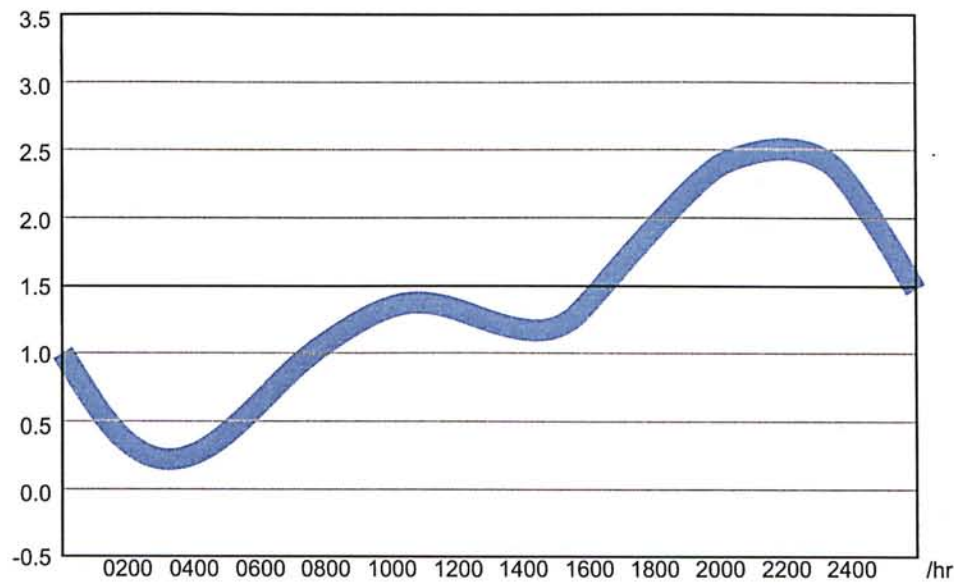
4.0 Precedents without architecture

-- Tides

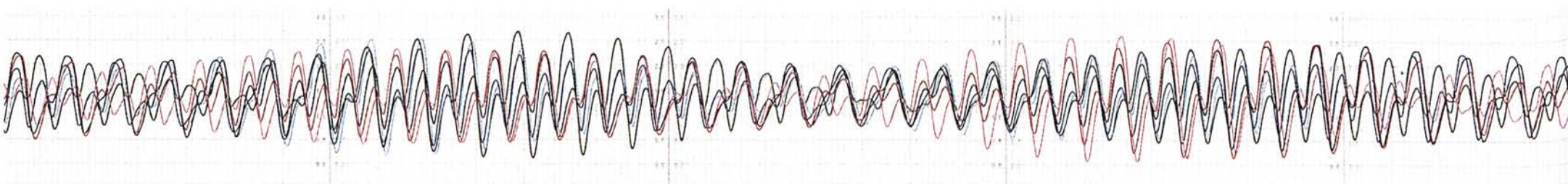
Tidal Change at Lay Yue Mun in 2009



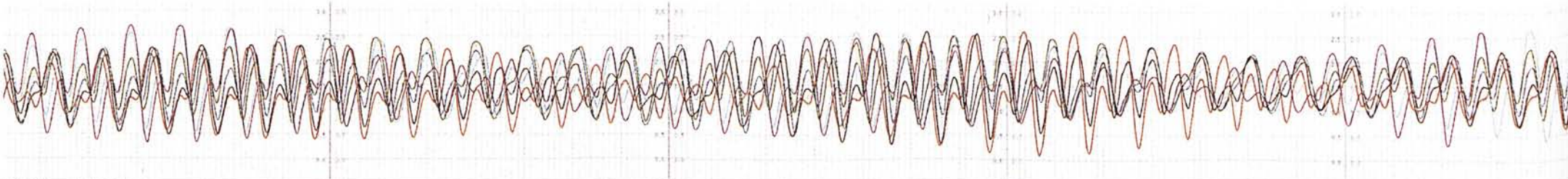
Maximum and minimum water level during tides in and out



Daily tidal change



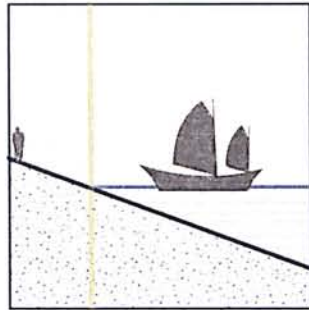
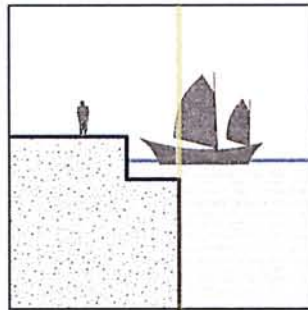
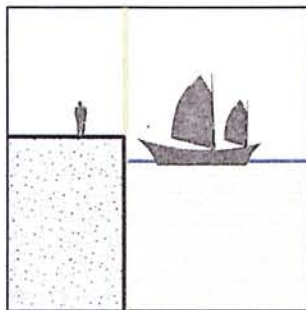
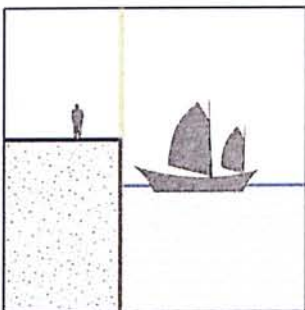
1/2009 - 6/2009



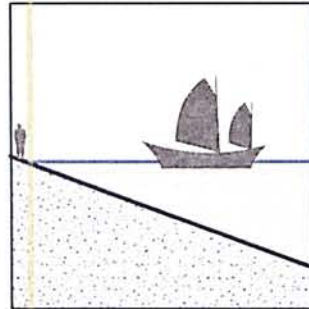
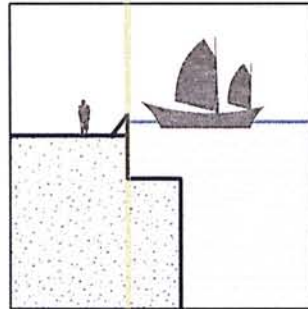
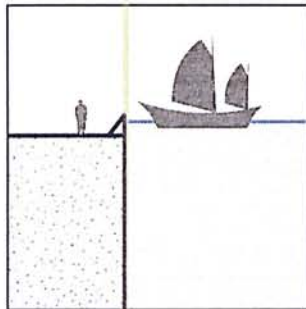
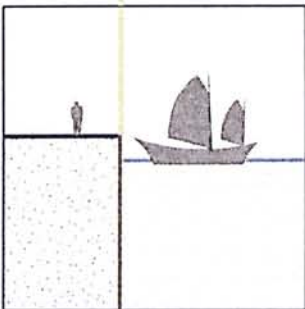
7/2009 - 12/2009

Changes of water edge when tide in or out

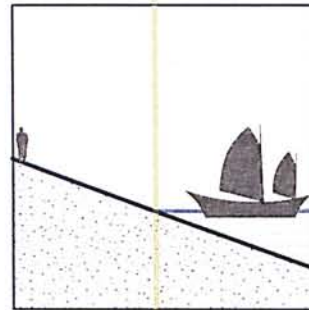
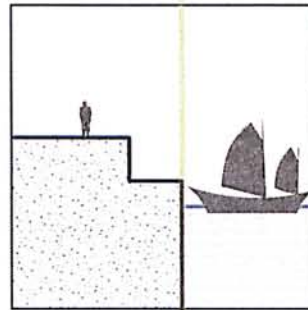
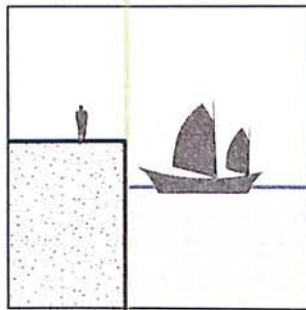
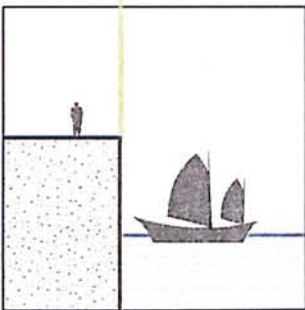
normal



tide in



tide out



examples



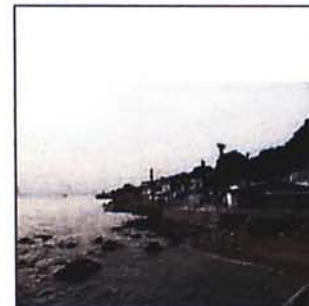
Kowloon



Wan Chai

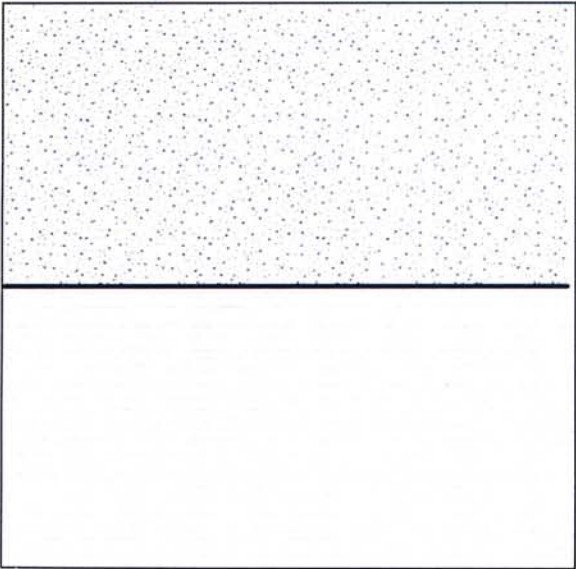


New York

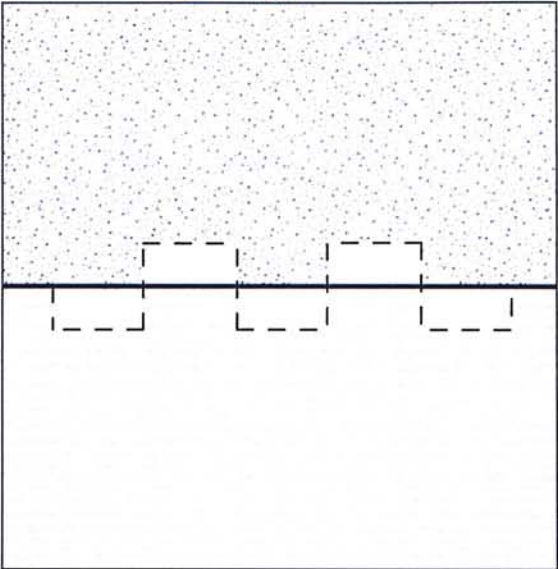


Lay Yue Mun

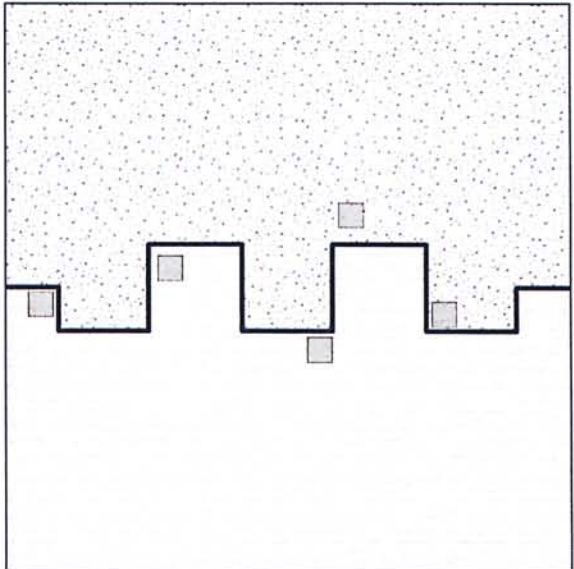
Changes of water edge when changing the waterfront profile



straighe coastal line

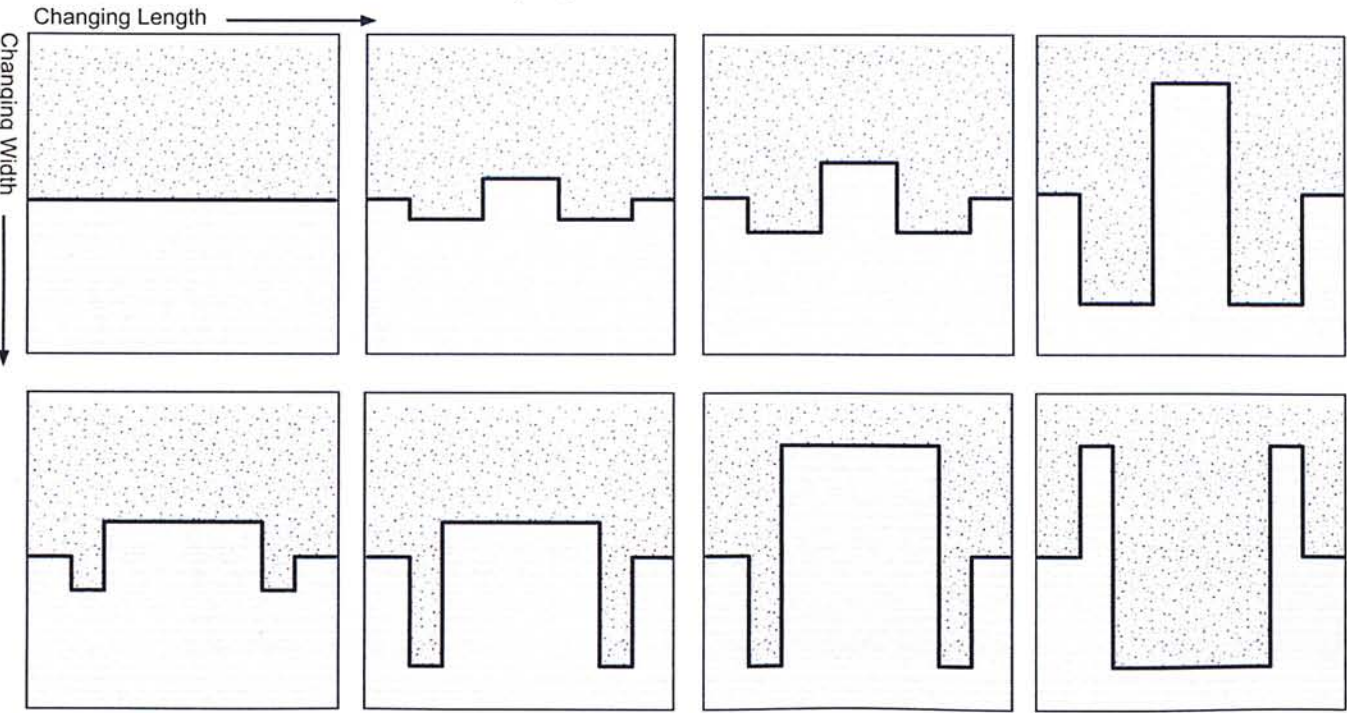


waving to elongate the coastal line

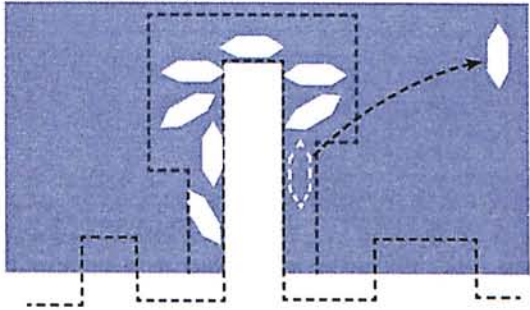


more spaces for different programmes

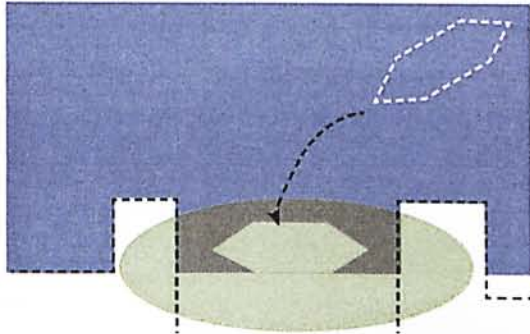
Reshaped coastal line in different proportion



Everchanging coastline



Program Carrier - activator



relationship between human and sea

existing



for viewing only



visually get closer to the sea

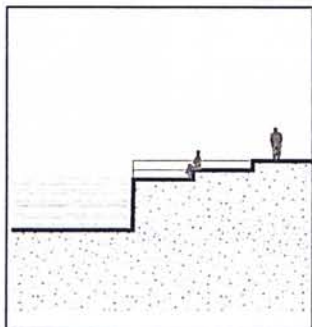


walking closer to the sea but seams still far away from it

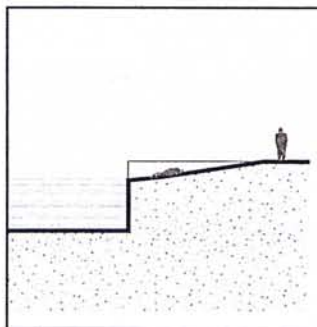
idealistic



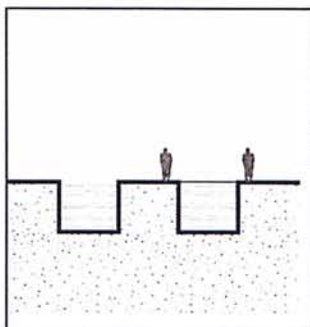
Existing coastal line



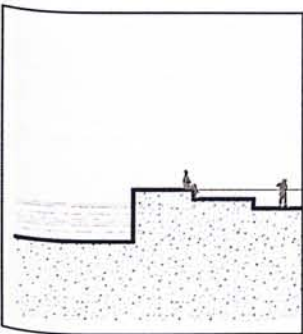
Sitting area



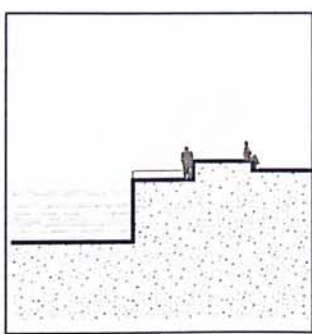
Lying



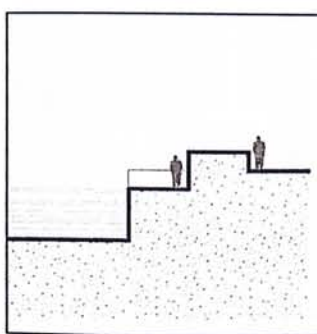
Bridges /flating platform



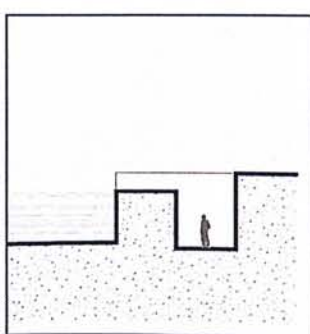
Performance stage



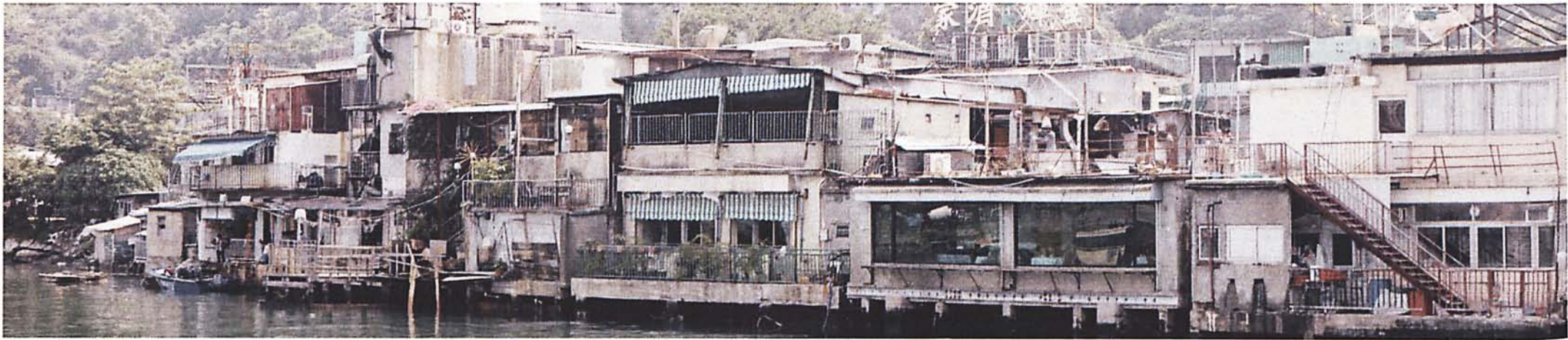
Leaning



Seperation of quiet zone



Rooms for special uses

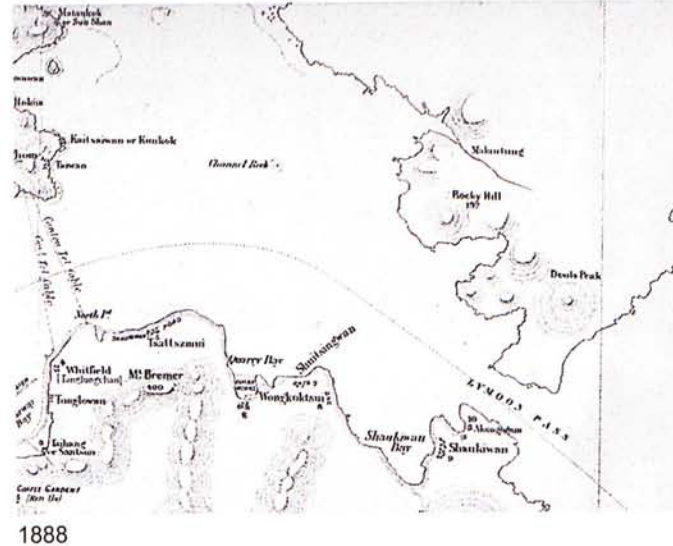
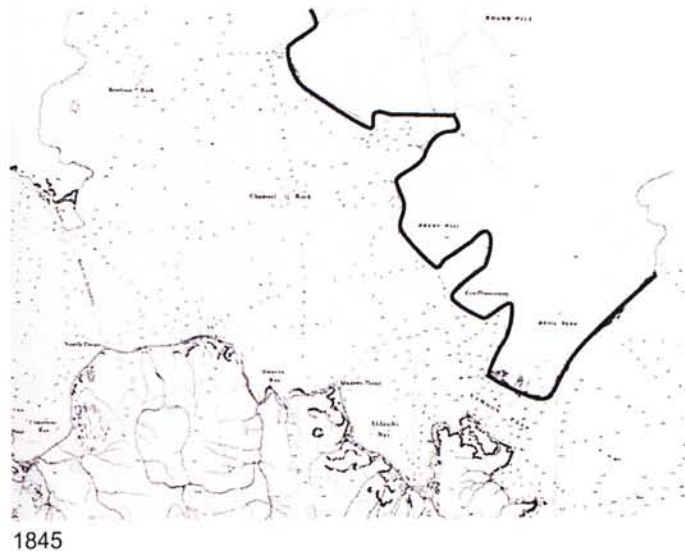


5.0 Potential site for experiment

-- Lei Yue Mun

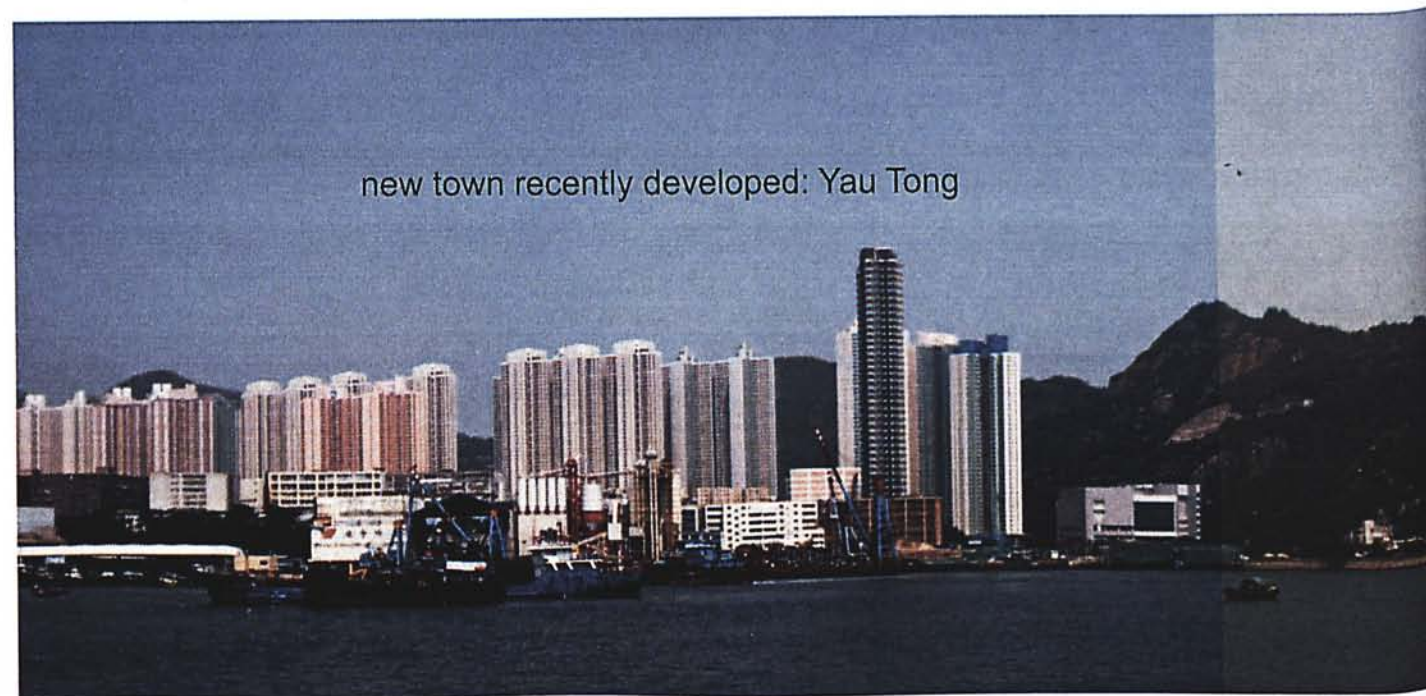
5.1 Background

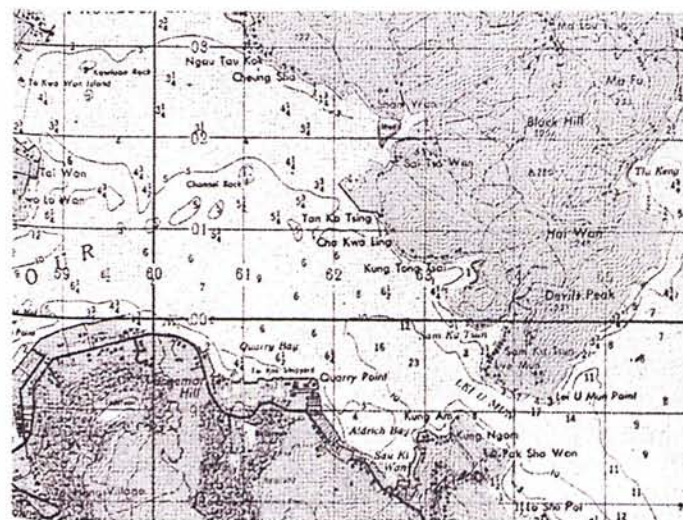
5.1.1 from historic point of view



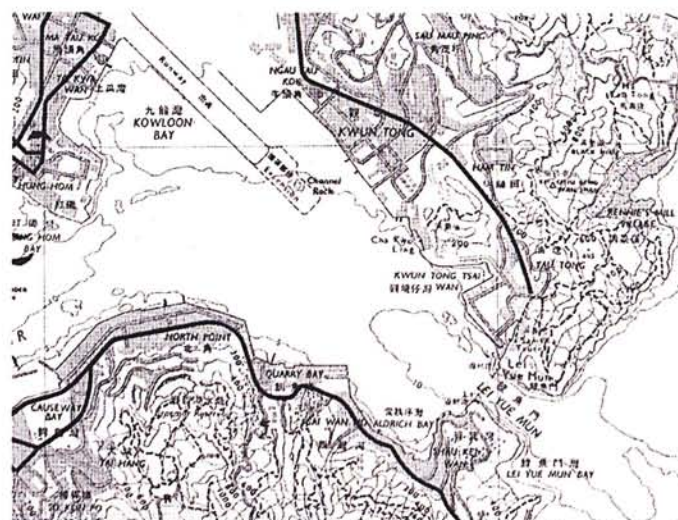
5.1.2 from geographic point of view

Lei Yue Mun is located at the south-eastern corner of the Kowloon Peninsula, where is a strategic location on the Lei Yue Mun Gap of water between Hong Kong Island and the Kowloon Peninsula. It is the gateway to the east of Hong Kong Harbour as well as the narrowest gap. And the area had been historically of military significance since the Ching Dynasty in the 17th century.





1949



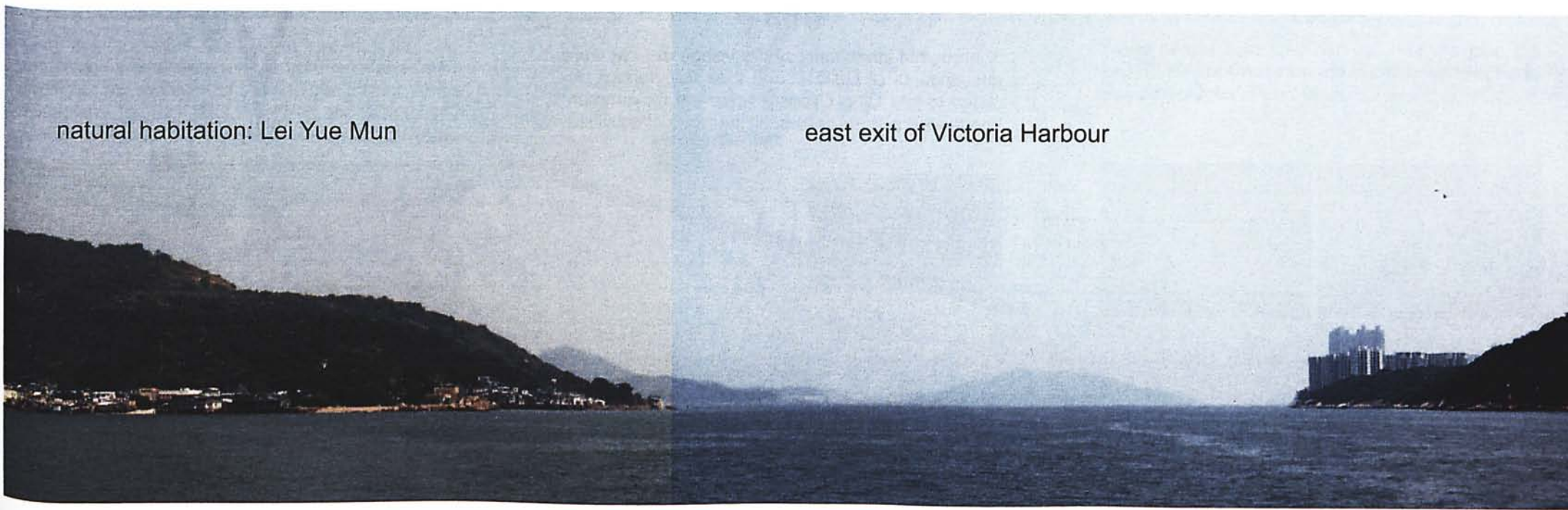
1971



1994

natural habitation: Lei Yue Mun

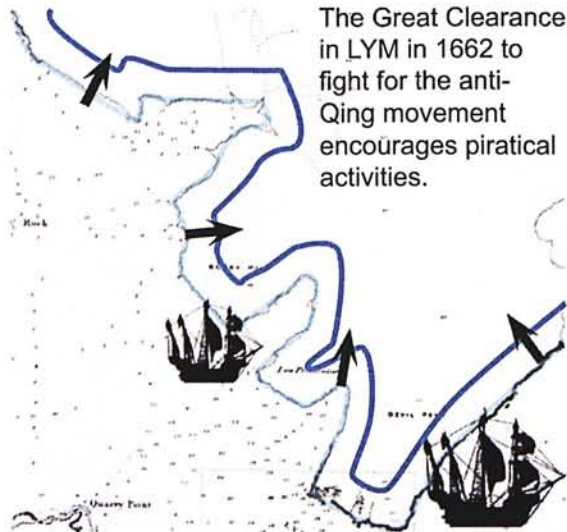
east exit of Victoria Harbour



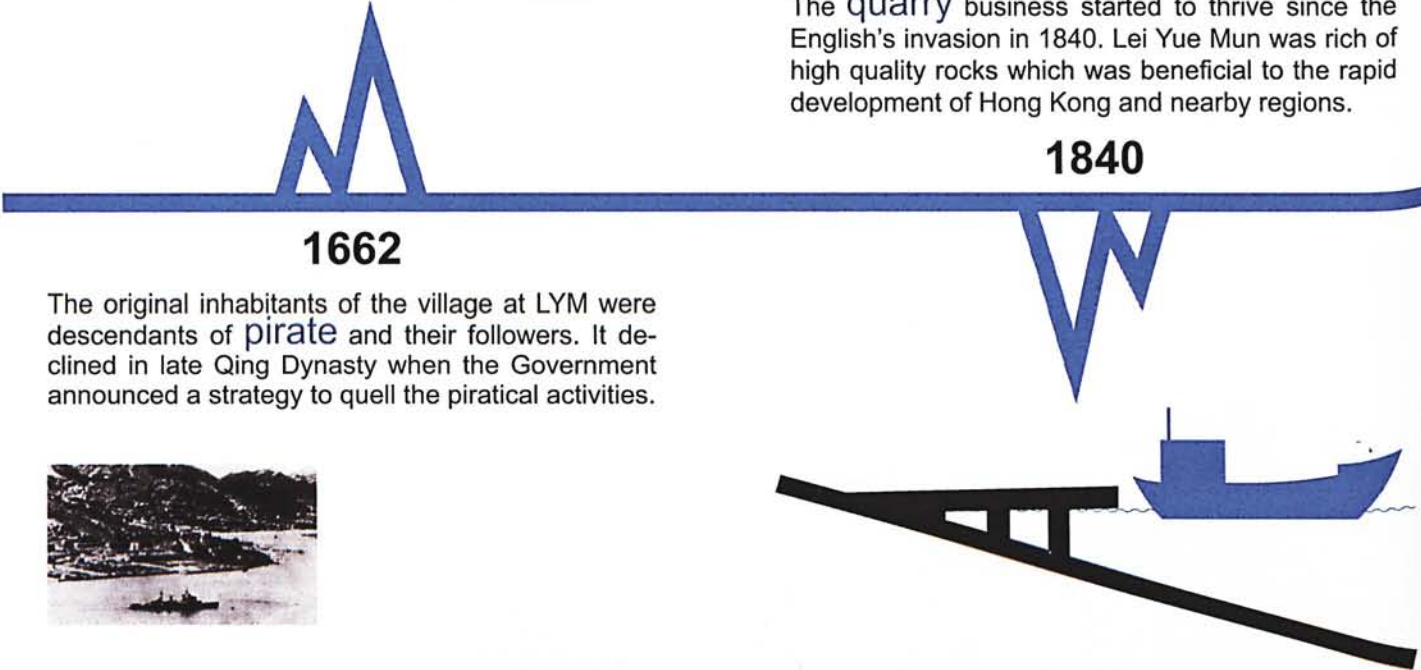
5.2 History

The name "Lei Yue Mun" was first found in "yue da ji" map in 16th century. It was originally a fishing village and being used as a military redoubt because of its strategically location.

It was also a site of a powerful gang of pirates. The pirate Cheng Lin-cheong built the Tin Hau Temple as a religious place for the village.



The quarry business started to thrive since the English's invasion in 1840. Lei Yue Mun was rich of high quality rocks which was beneficial to the rapid development of Hong Kong and nearby regions.

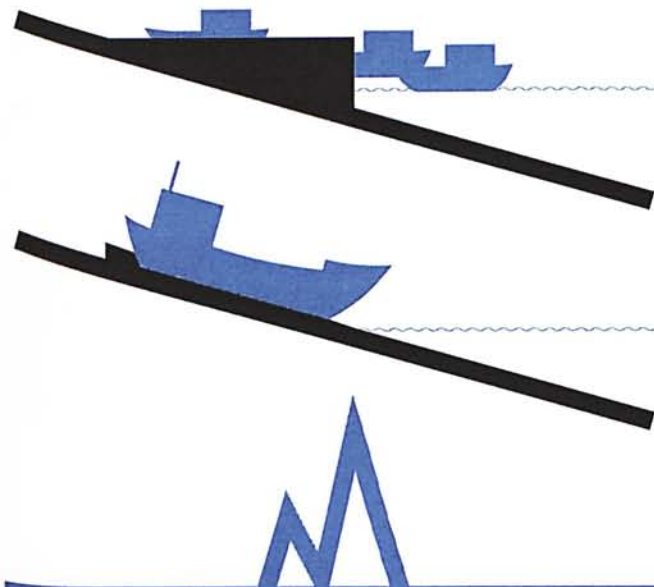


1662

The original inhabitants of the village at LYM were descendants of pirate and their followers. It declined in late Qing Dynasty when the Government announced a strategy to quell the piratical activities.



1840



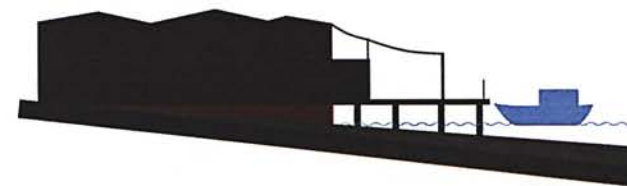
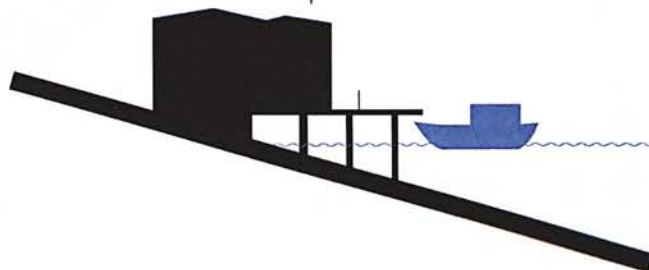
1940

Light industry in Lei Yue Mun thrived after the Second World War since refugees from mainland China brought their money and skills to this district. At the same time, the **fishing market** and **shipyard** started to appear at the U-shaped Bay at Yau Tong.



When people sold their harvest near the pier, the **Seafood** business started and was prosperous in middle of 1960s.

1965



1980

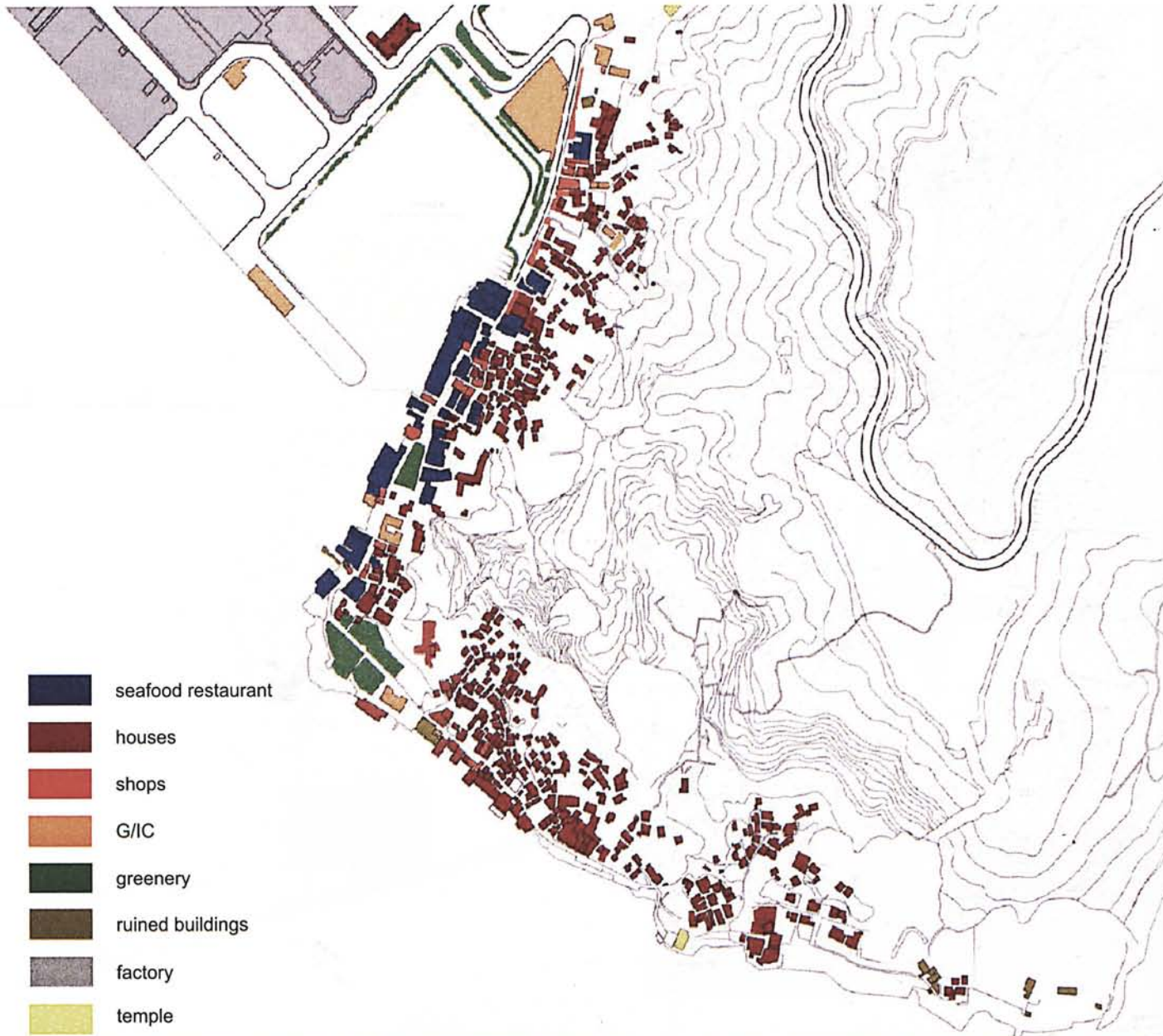
When people sold their harvest near the pier, the **Seafood** business started in middle of 1960s and was prosperous since 1980s.



5.3 LYM Nowadays



Perhaps the best known place in the district is the popular seafood restaurant area of Lei Yue Mun, which has been in existence for more than 150 years. The original inhabitants were pirates, farmers, fishermen and quarry workers. Much of the fishing village along the shores were thatched huts built on stilts above the water and “walla wallas” (small motorized sampans) would ferry passengers across the Lei Yue Mun channel to and from Hong Kong Island.



Interview with different people



The temple keeper Mr. Chan was once a stone worker in the quarry. He told us that the ships for delivering stones only came when the tide is in. Normally they came twice a month. Nowadays most piers had collapsed. Only one ruined remained at the end of the village.



Mrs. Wan has lived in Lei Yue Mun for almost 10 years. She lives with her husband and 24-year-old son and her married daughter had moved out. The couple will only leave LYM to buy some commodities and their son only goes out for work.

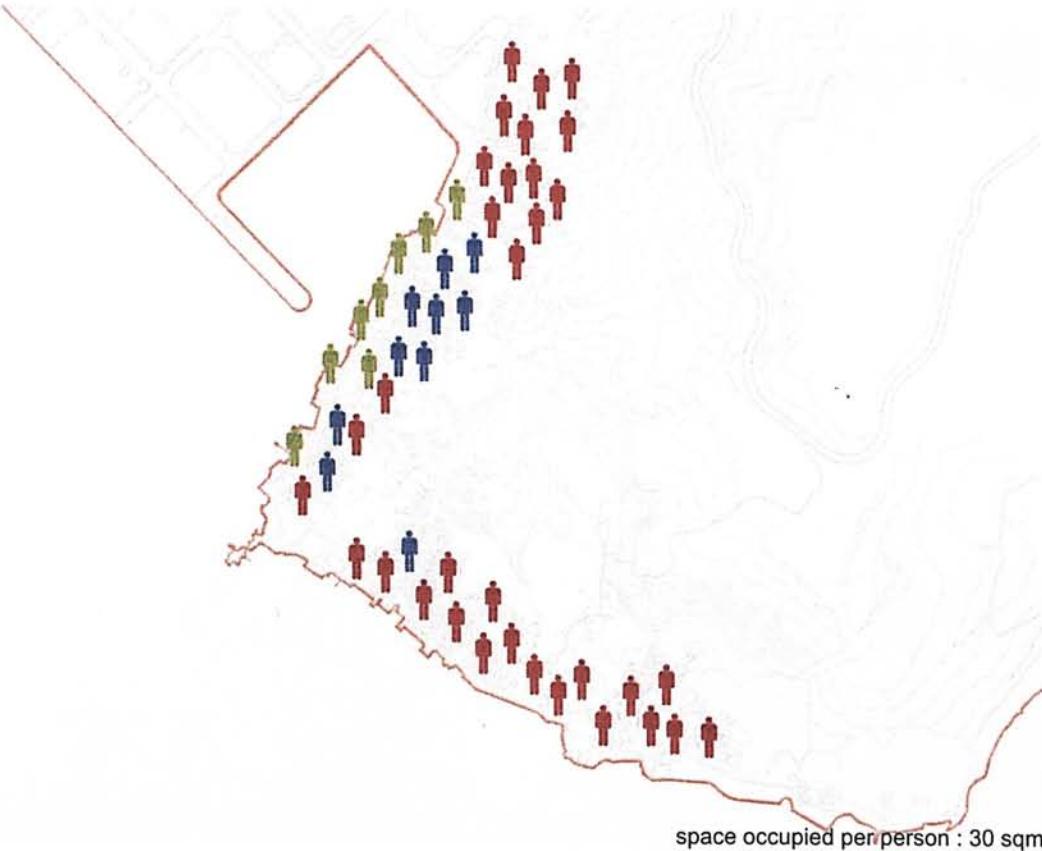
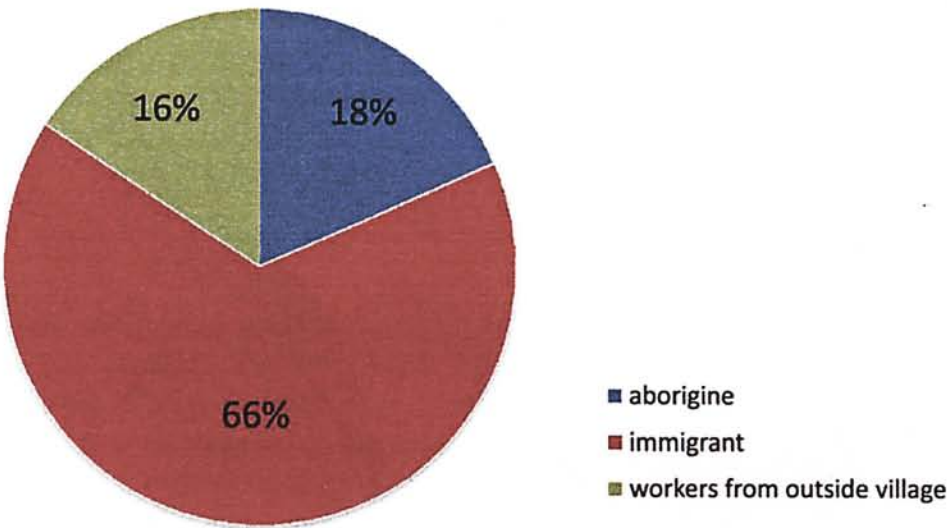


Mr. Tan & Mr. Lung are the staffs of a seafood restaurant. They experience the thriving and decline of seafood business in LYM. And they the Government could do something to brisk up the seafood business as well as the LYM society again.



Mr. Wong is a residence nearby. He would like to come to the seashore for fishing when he is free. He mentions that most people like to fish here because its peaceful environment, convenience and historical phenomenons.

Population and Distribution in 2009



Village and the Sea

the first seafood restaurant



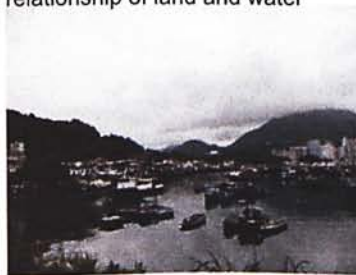
photo taken in 1950s

Hoi Bun School

— shoreline in 1950s

The shoreline of LYM has been extended sea-ward a lot since 1950. The original shoreline becomes the main street nowadays and buildings fully occupied both sides of the street. Only a few narrow paths guild people from the street to the sea. However, there are some public open spaces along the street and most activities take place at these spaces.

relationship of land and water

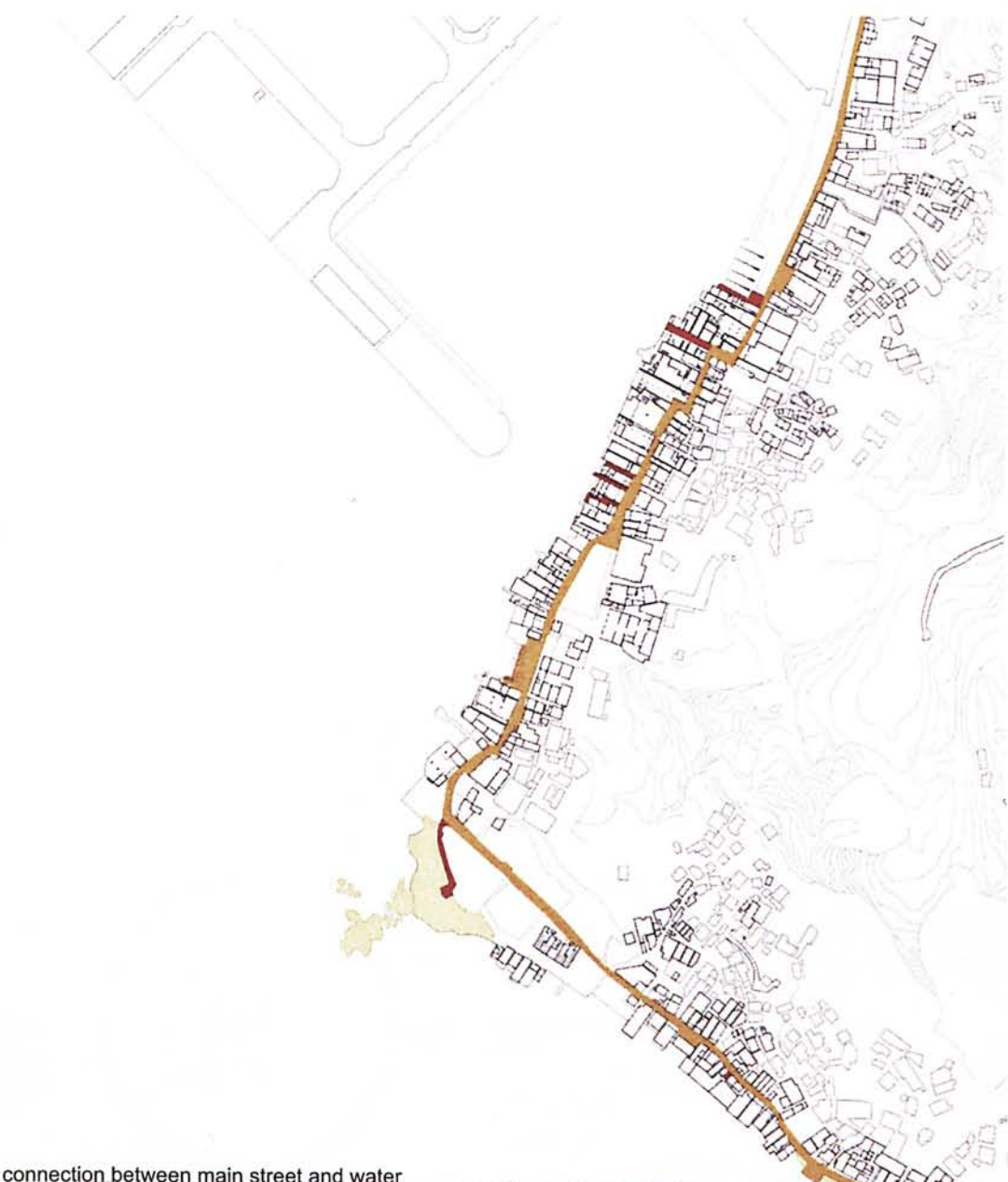
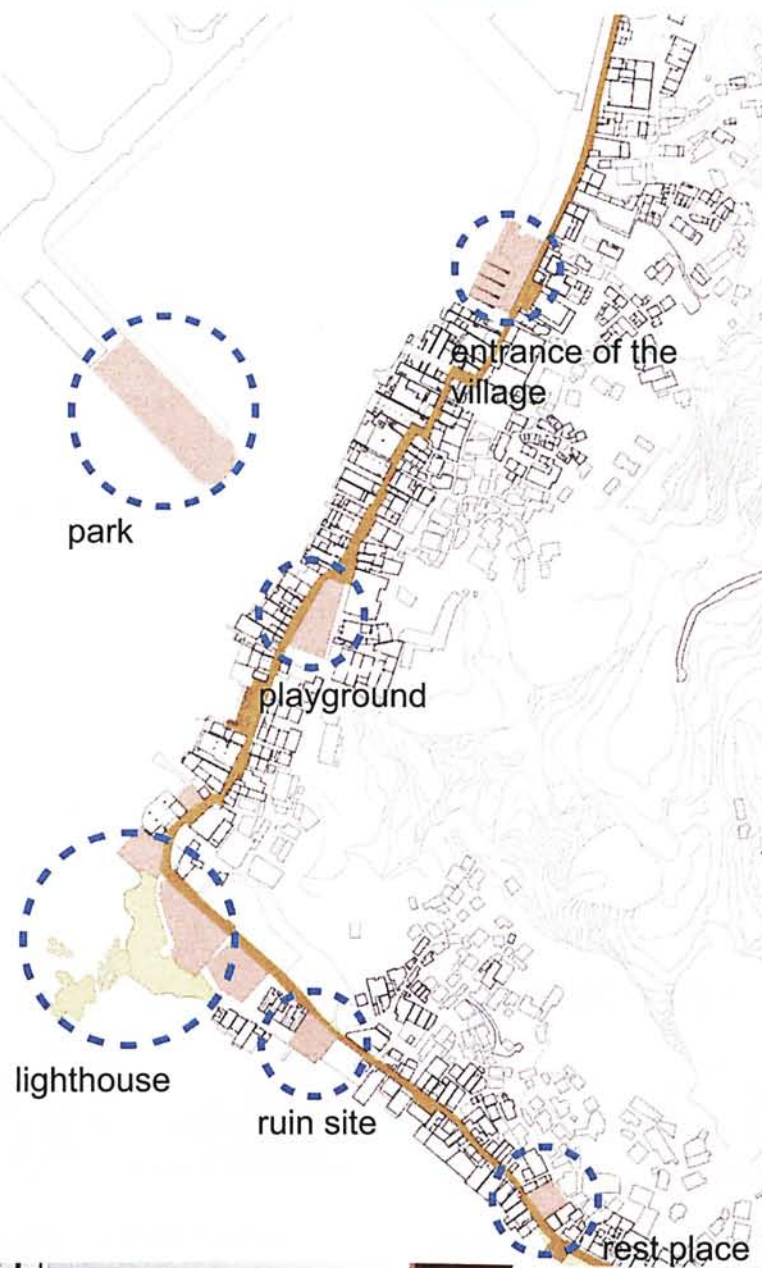


water embraced by land

finger penetration

land embraced by water

Streets



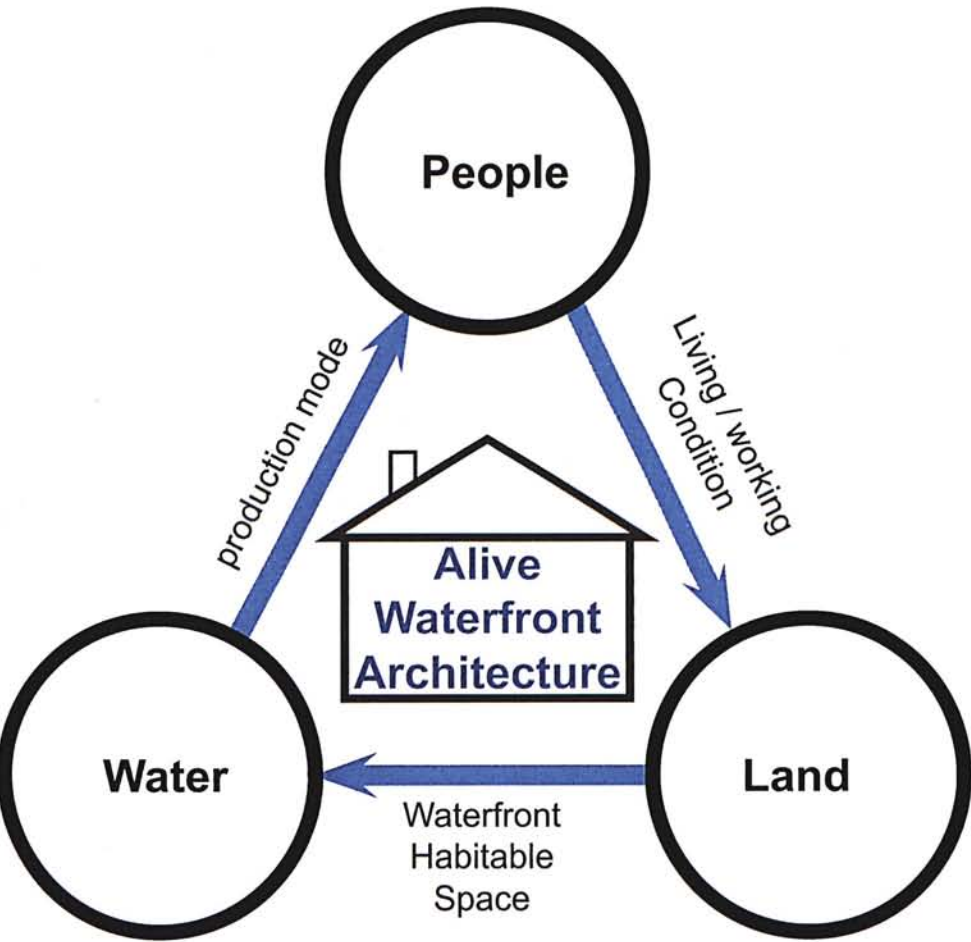
Public spaces



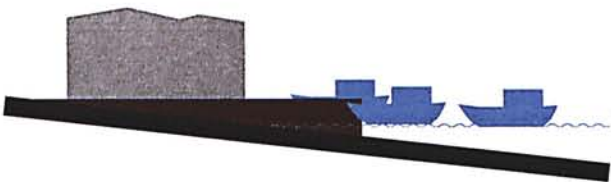
connection between main street and water



Evolution of Architecture



Waterfront Houses



Buildings (residential) started to be built near the stone delivering piers. Later, one of the pier became a seafood market.



Residential buildings transform seafood restaurant and owned personal pier.

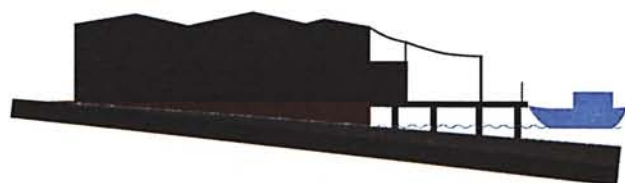
Village Houses



The immigrants built their first house in the village by steels and metal sheets or by wood.



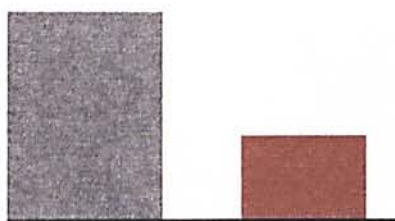
When they earned more money, they improved their houses to be a concrete one. Later, they built another one-room steel house in front. And it is used to be a kitchen or a washroom.



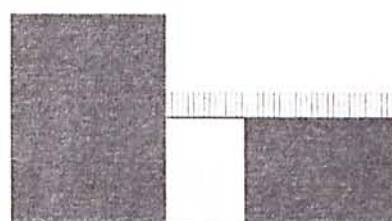
The pier was extending towards the sea for transferring seafood as long as the seabed was getting higher and higher.



Village Paths



The concrete house was upgraded from one storey to two if people earn even more money.



Some villagers even transformed their kitchen / washroom into the concrete house.



Seldom rich villagers finally upgraded their house to be a two storeys concrete houses but still maintained the original public path.

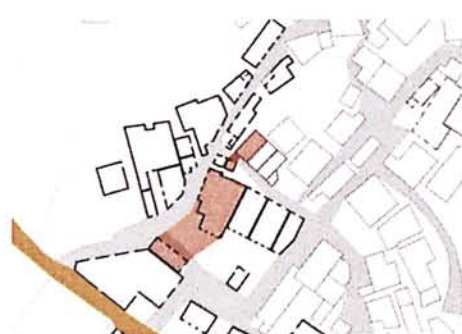
Houses Crossing Village Paths



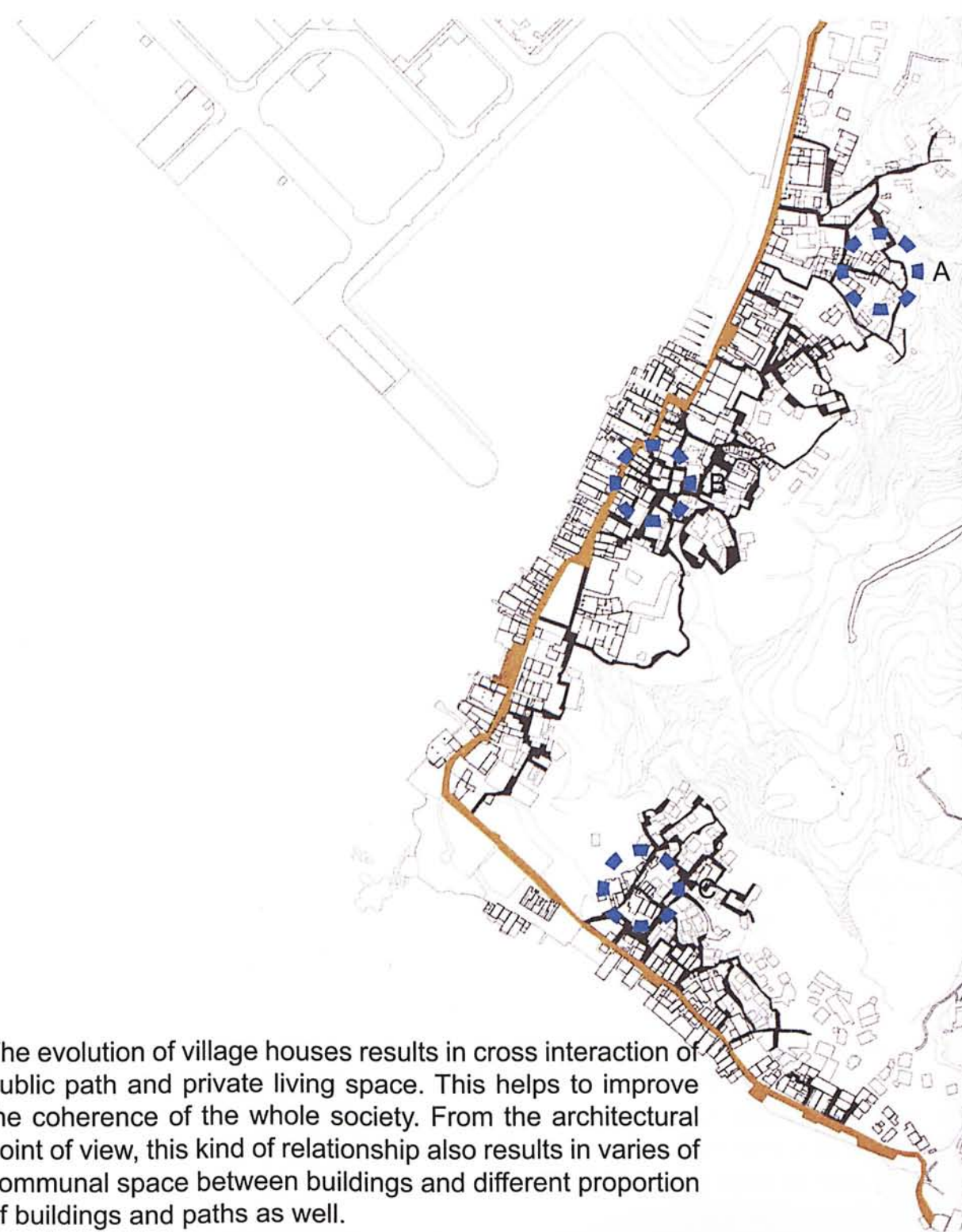
A



B



C



The evolution of village houses results in cross interaction of public path and private living space. This helps to improve the coherence of the whole society. From the architectural point of view, this kind of relationship also results in varies of communal space between buildings and different proportion of buildings and paths as well.

Space Connector -- staircase

The best streets encourage participation. And participation in the life of a street involves the ability of people who occupy buildings to add something to the street to be part of it. That contribution can take the form of signs or flowers or awnings or color, or in altering the buildings themselves. [Allan B. Jacobs] The use of light material, such as wood and steel, is one the forms of architectural expression in LYM. This kind of building material not only contributes to street life but also the space transition.

Type A -- attached to buildings



Type B -- acrossing public path



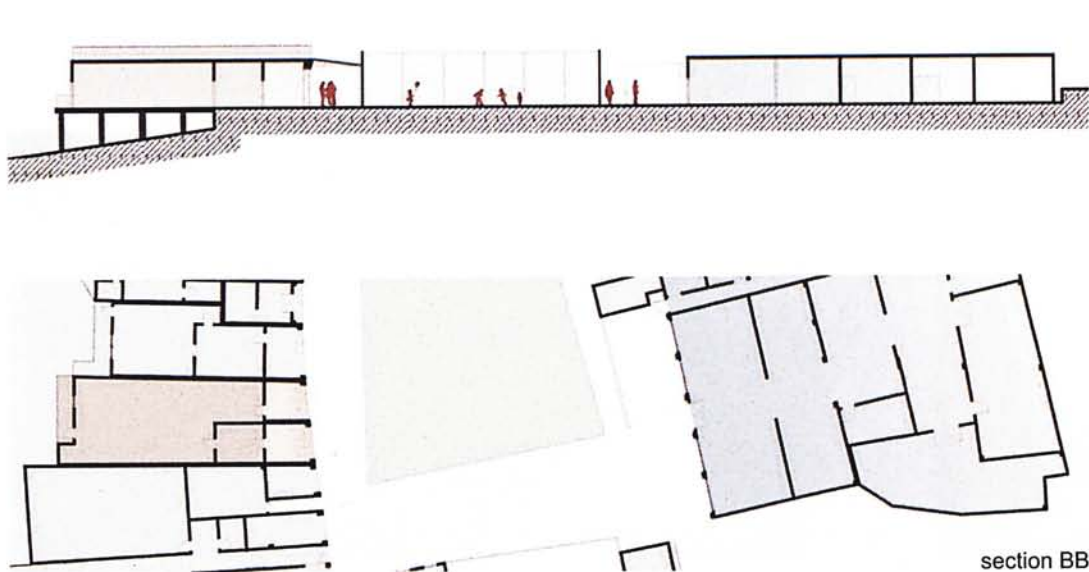
Type C -- connecting two buildings owned by one family



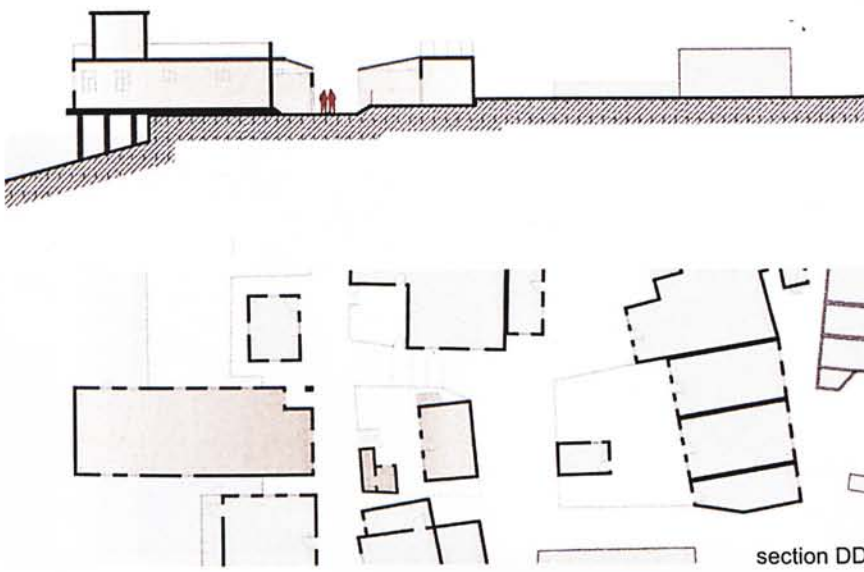
Relationship among Buildings, Land and Water

The layout of LYM could be clearly divided into four layers. The village is embraced by the first layer - water. The second layer is a habitable zone which is occupied by different programs like restaurant, residence and shops. The main street, Praya Road, comes next to this zone and another wider habitable zone starts from another side of the street up to the mountain, evil hill. Since there are quite a lot public spaces with different programs along the street, the buildings on tow zones also vary in different programs and forms. The five sections cut through different public space to show different relationship between water and land, land and buildings, buildings and street, buildings and water.

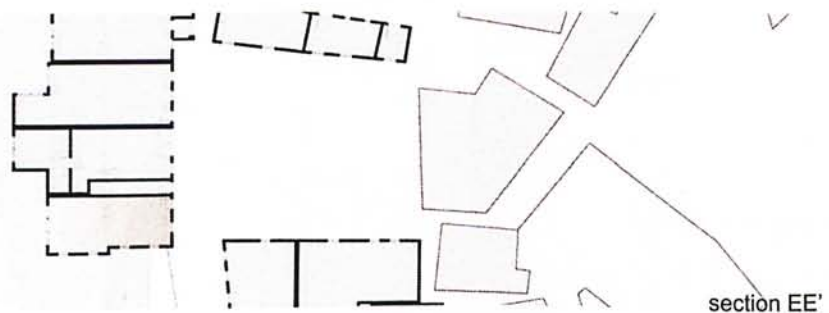
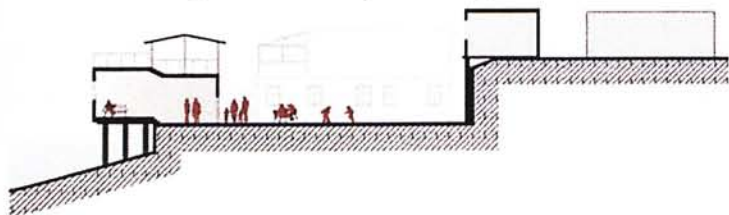
Shop House facing playground



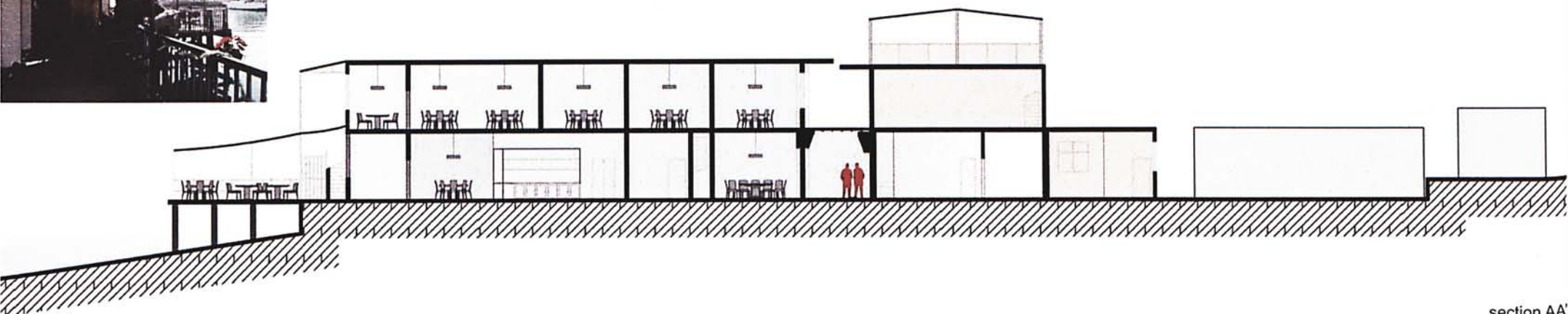
Houses situated along the street



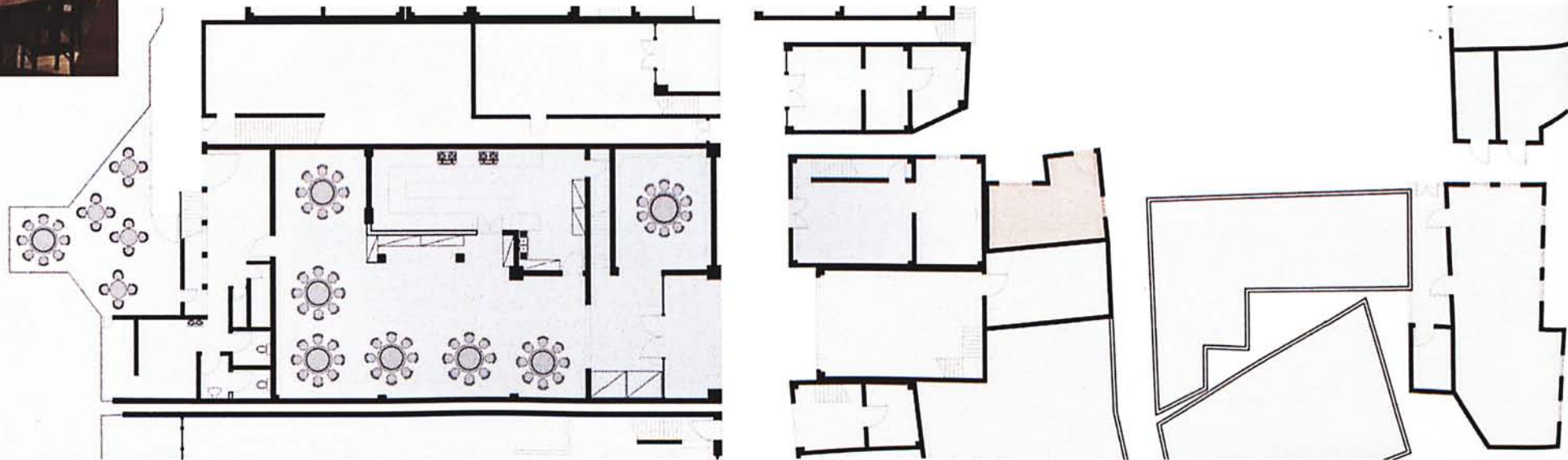
House facing an active public space



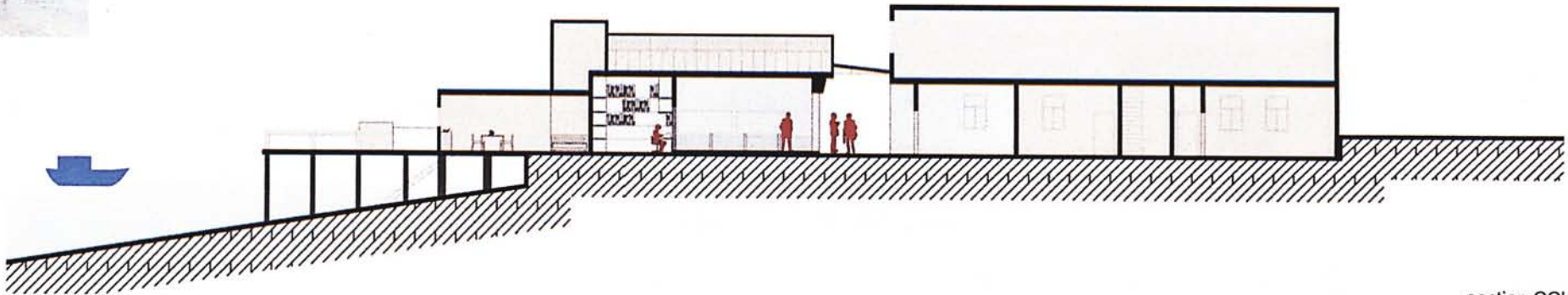
Restaurant occupying all space from sea to other side of street



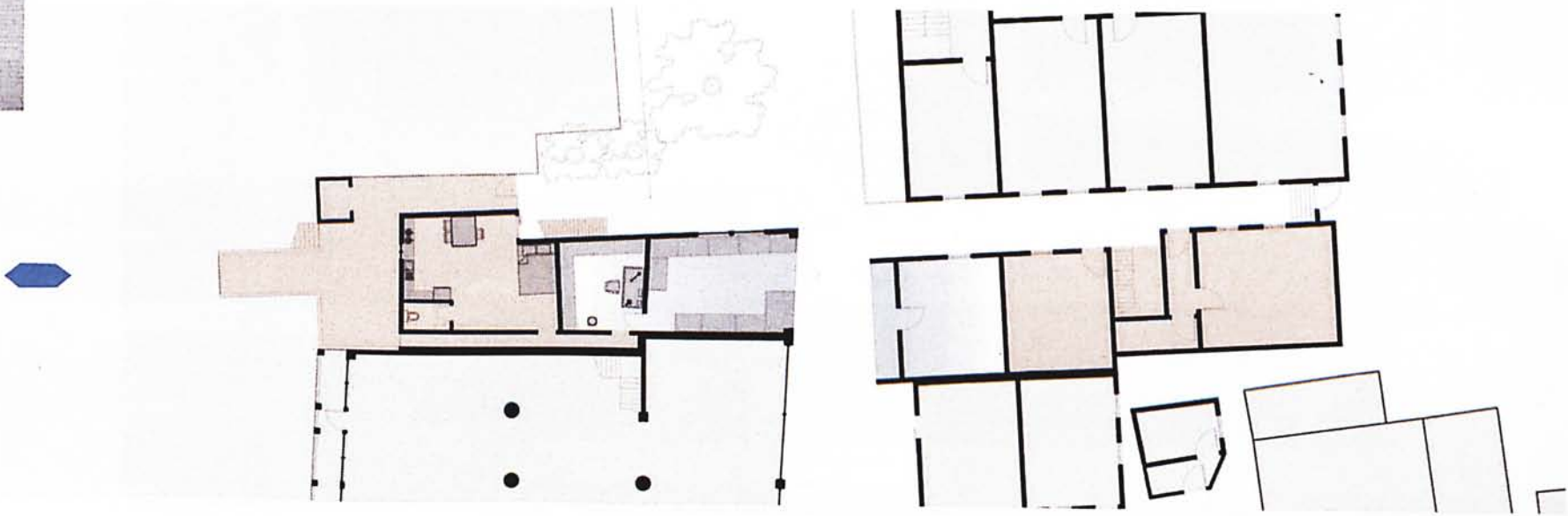
section AA'



Shop House facing main street



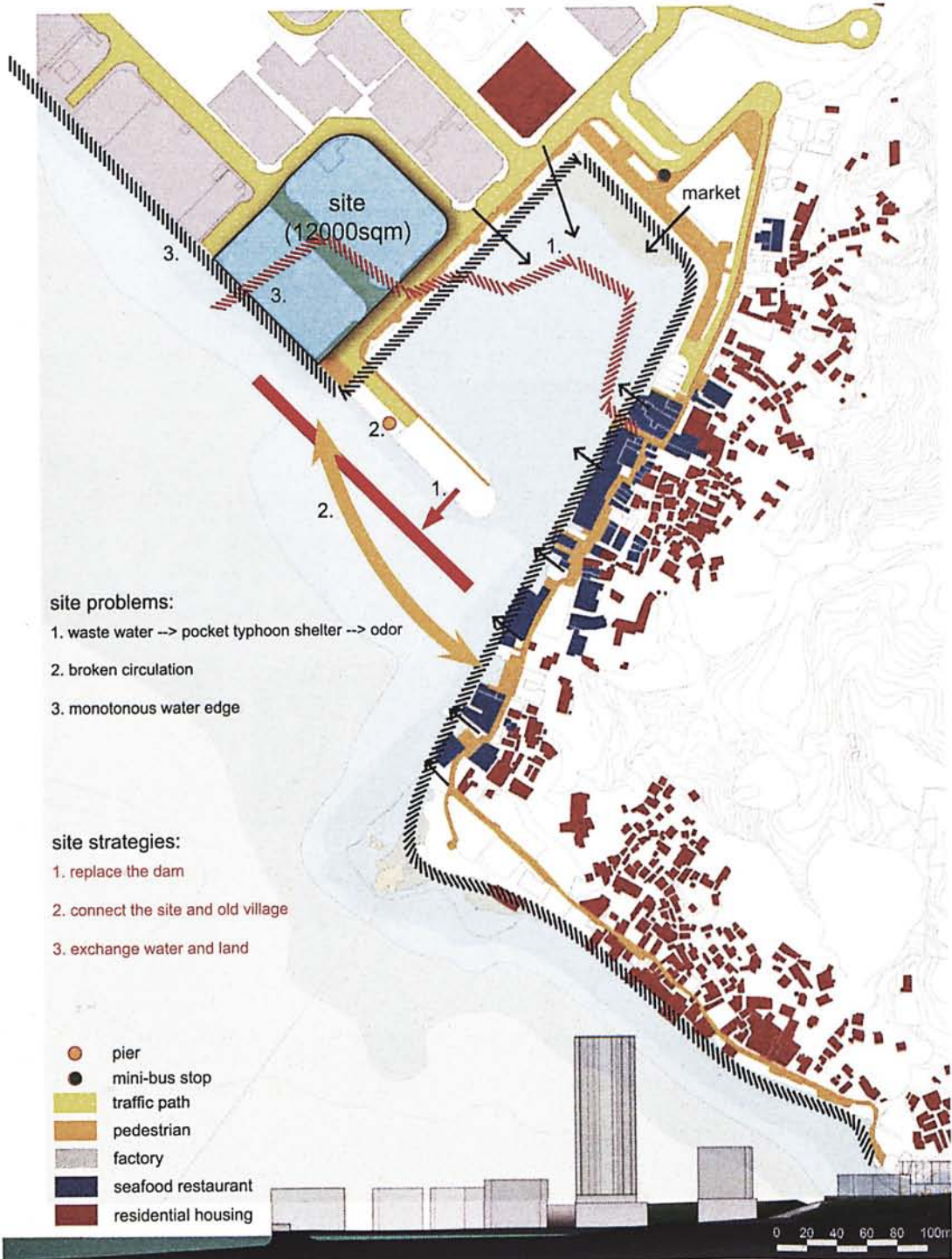
section CC'





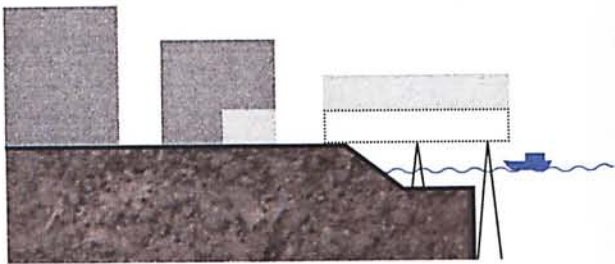
6.0 Schematic Design

6.1 Site Strategy

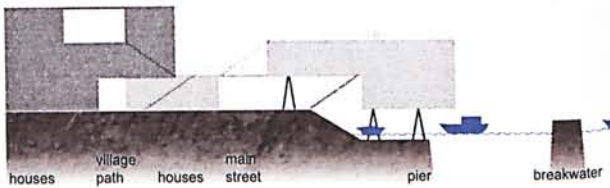


Principles

A. soft edge between land and water



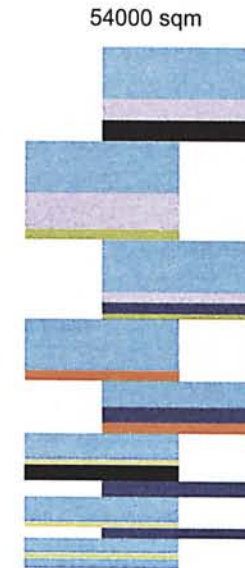
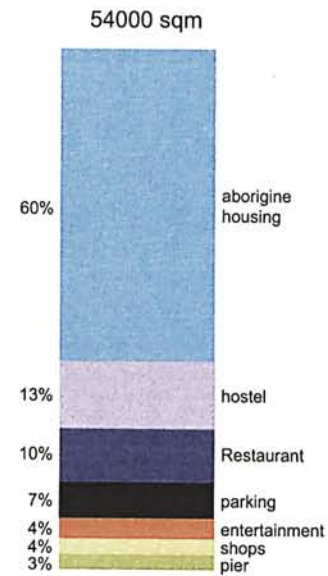
B. different level of publicity/privacy



C. midium density

Places	Plot Ratio
Amsterdam	2.0
Canaryside	6.8
New Housing	4.5

Program reshuffle



6.2 Special Study - waterfront transitional spaces

6.2.1 Understanding



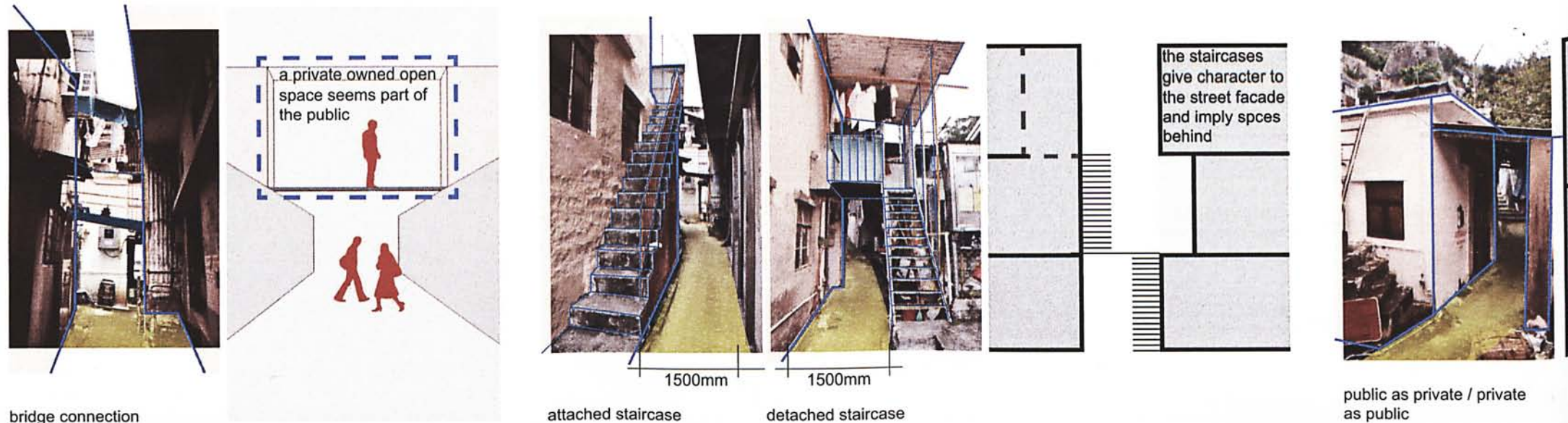
Different scale of communal spaces and transition between buildings and these spaces are the most typical characteristic of LYM. And the study shows us that staircase play an important role in the space transition.

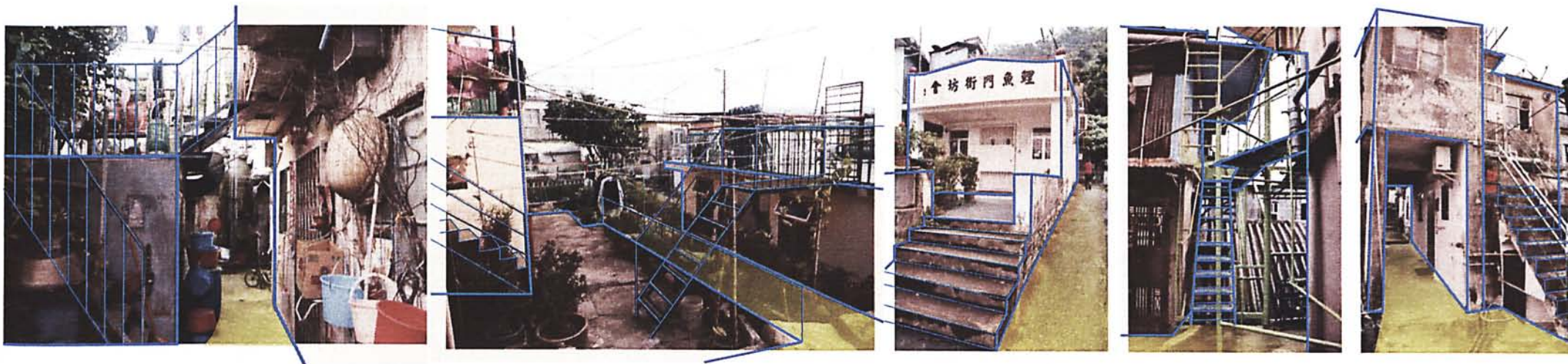
6.2.2 Systemizing

inside / outside

envelop / street

p

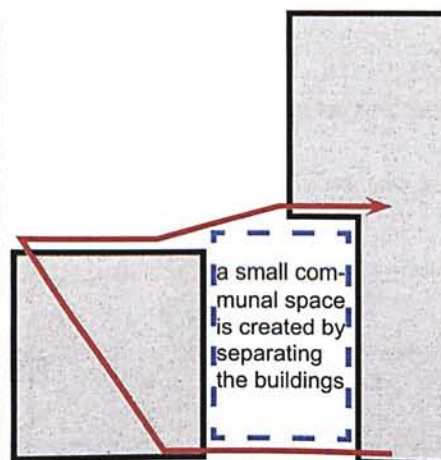
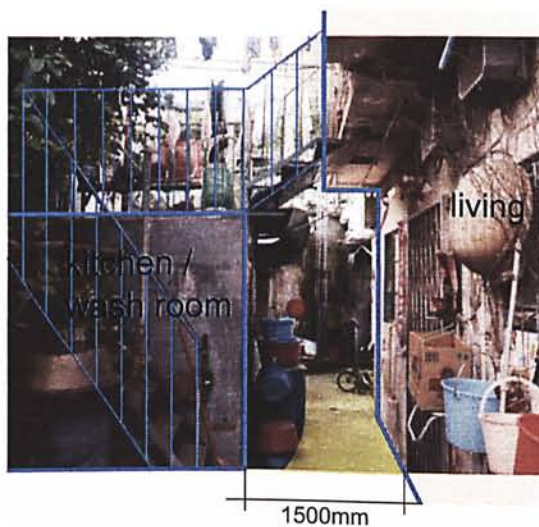
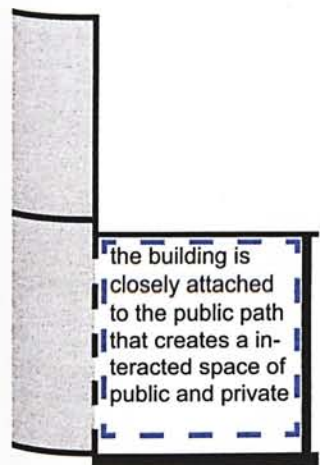




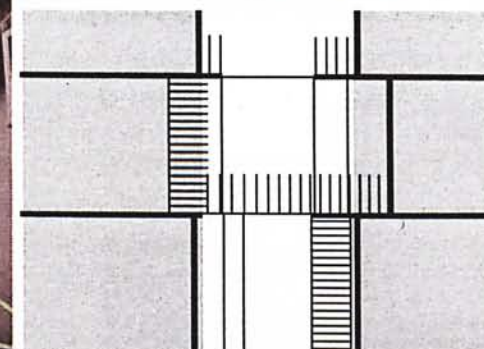
/ private

division of programs

material



the steel structure helps to soften the concrete building edge as well as connect the two spaces without blocking the in between space



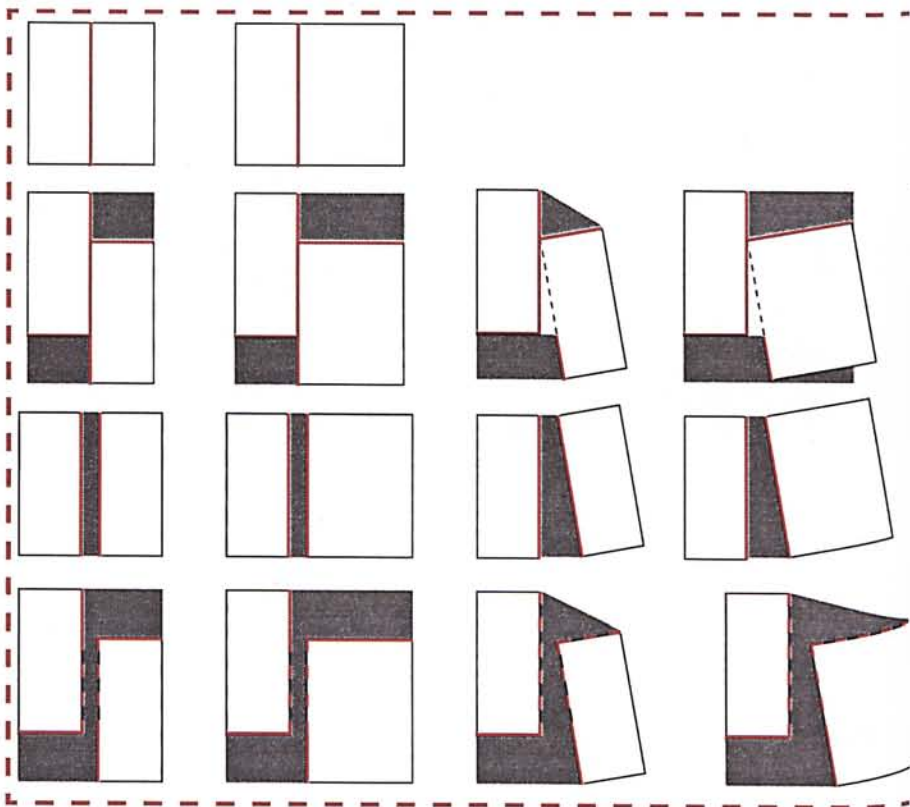
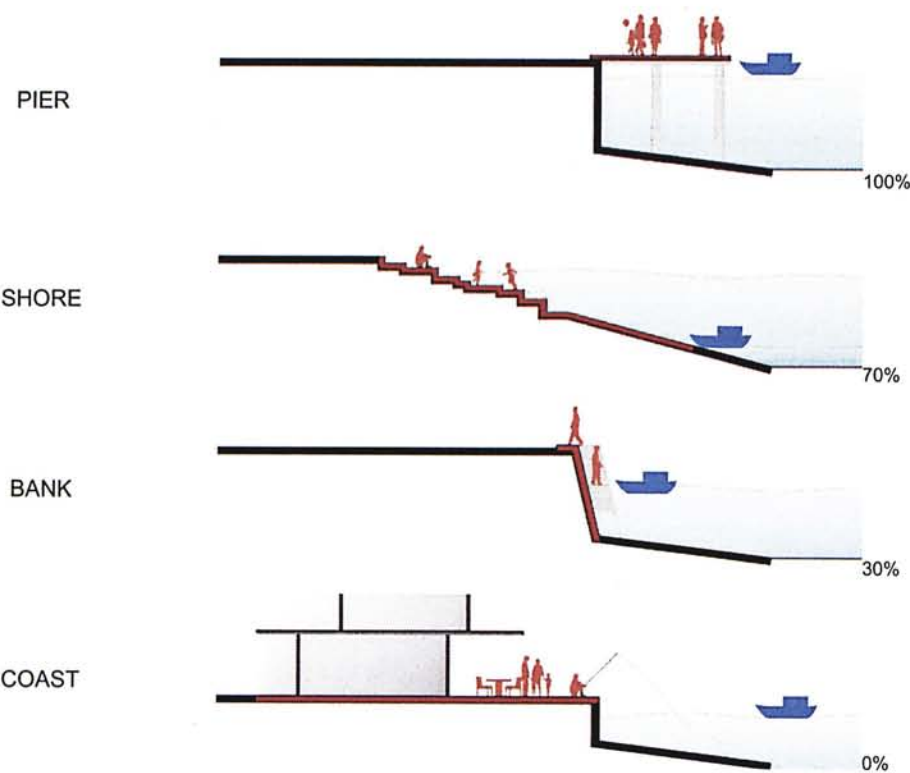
steel structure

6.2.3 Theorizing

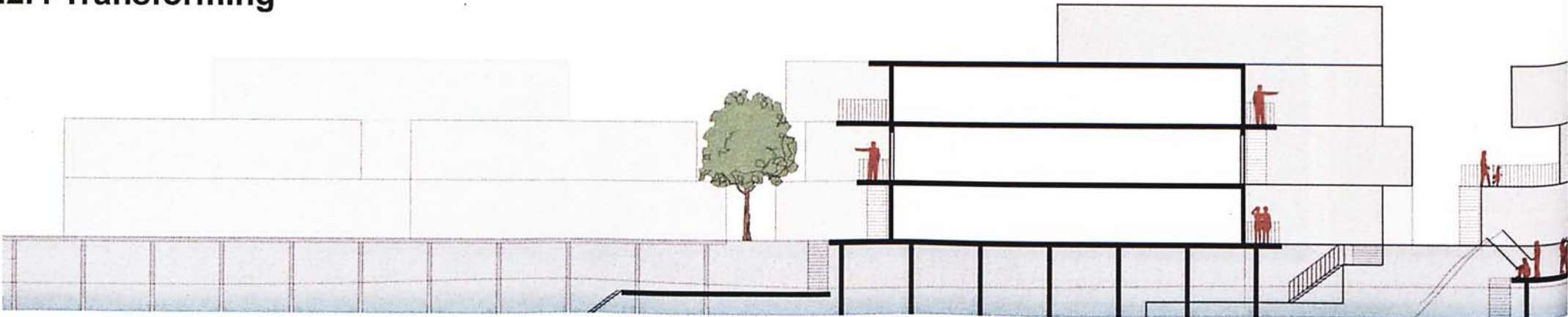
types of waterfront space

spatial quality

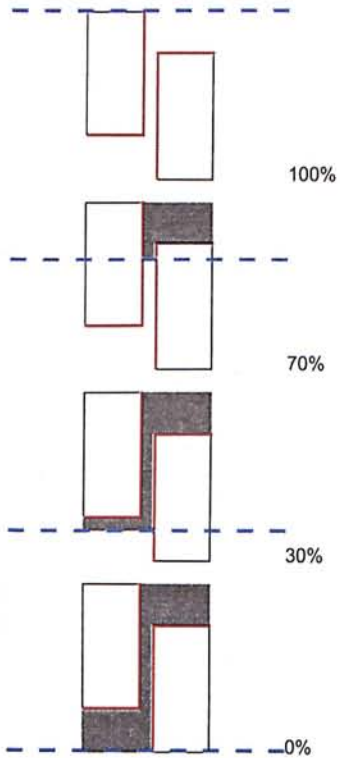
houses relationship



6.2.4 Transforming



attach quantity of coastline
and building

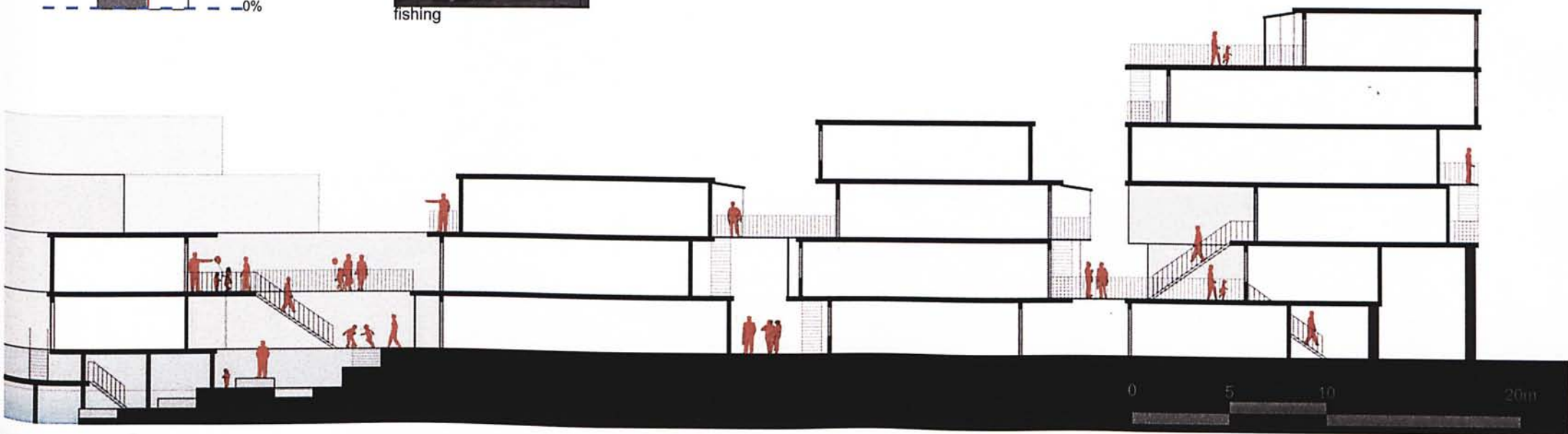


possible program

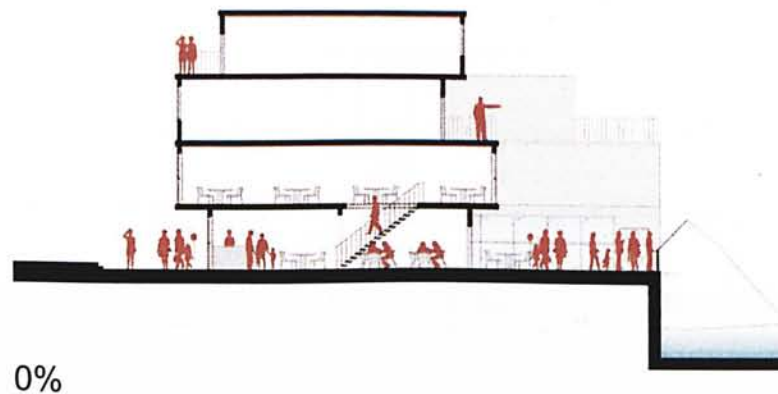
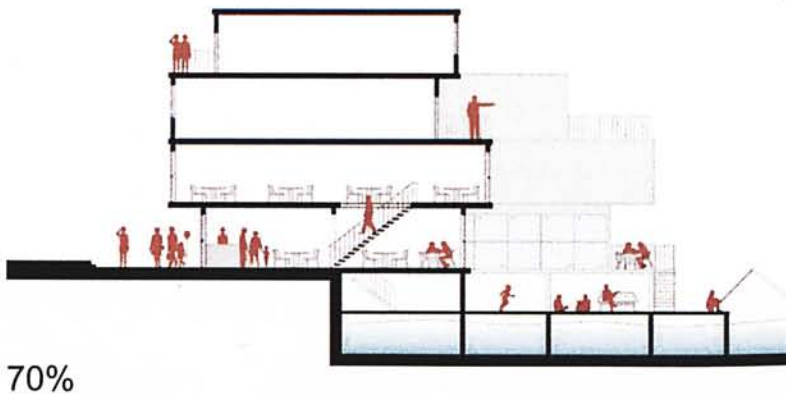
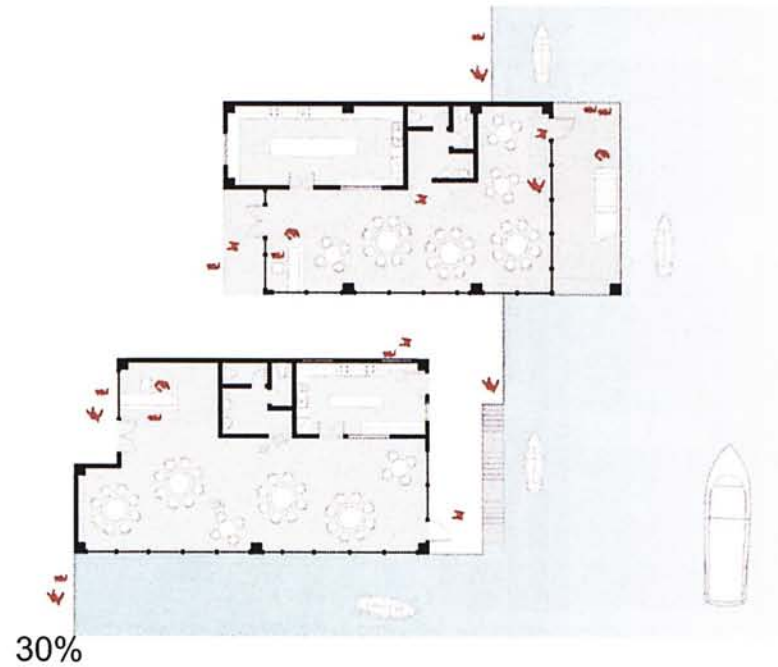
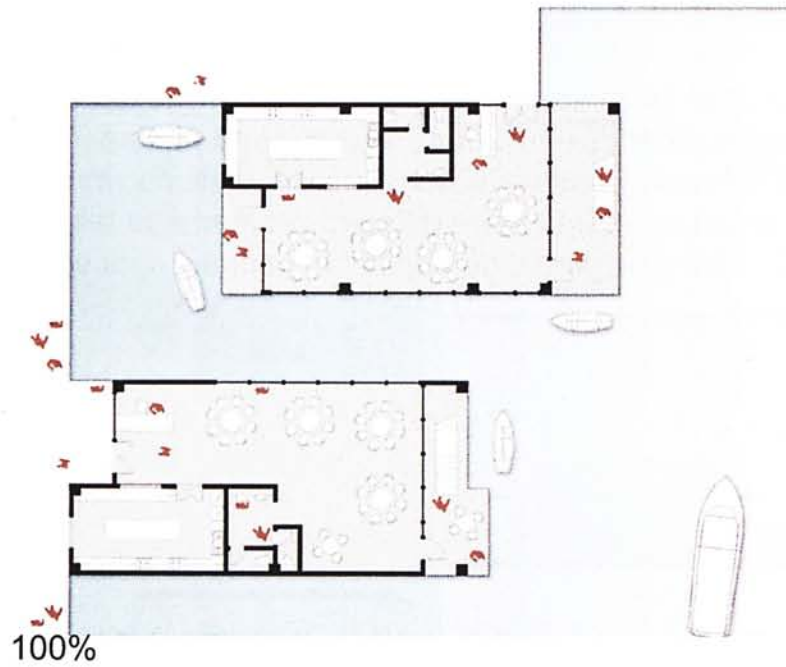


Waterfront, according to the definition in chapter 1, is the zone between land and water. However, depending on the quantity of attachment of land and water, waterfront space could be grouped into four types: pier, shore, bank and coast. The space quality of them encourages different activities happen there.

The previous site study shows us that there are many different house relationship and different kinds of communal spaces between buildings. When these varied house relationships are fit to different types waterfront, more variations would be created and they encourage much more and more different programs to take place. As in the existing situation, staircase would be applied to connect spaces.

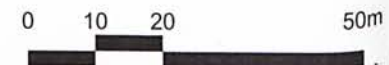


6.2.5 Testing

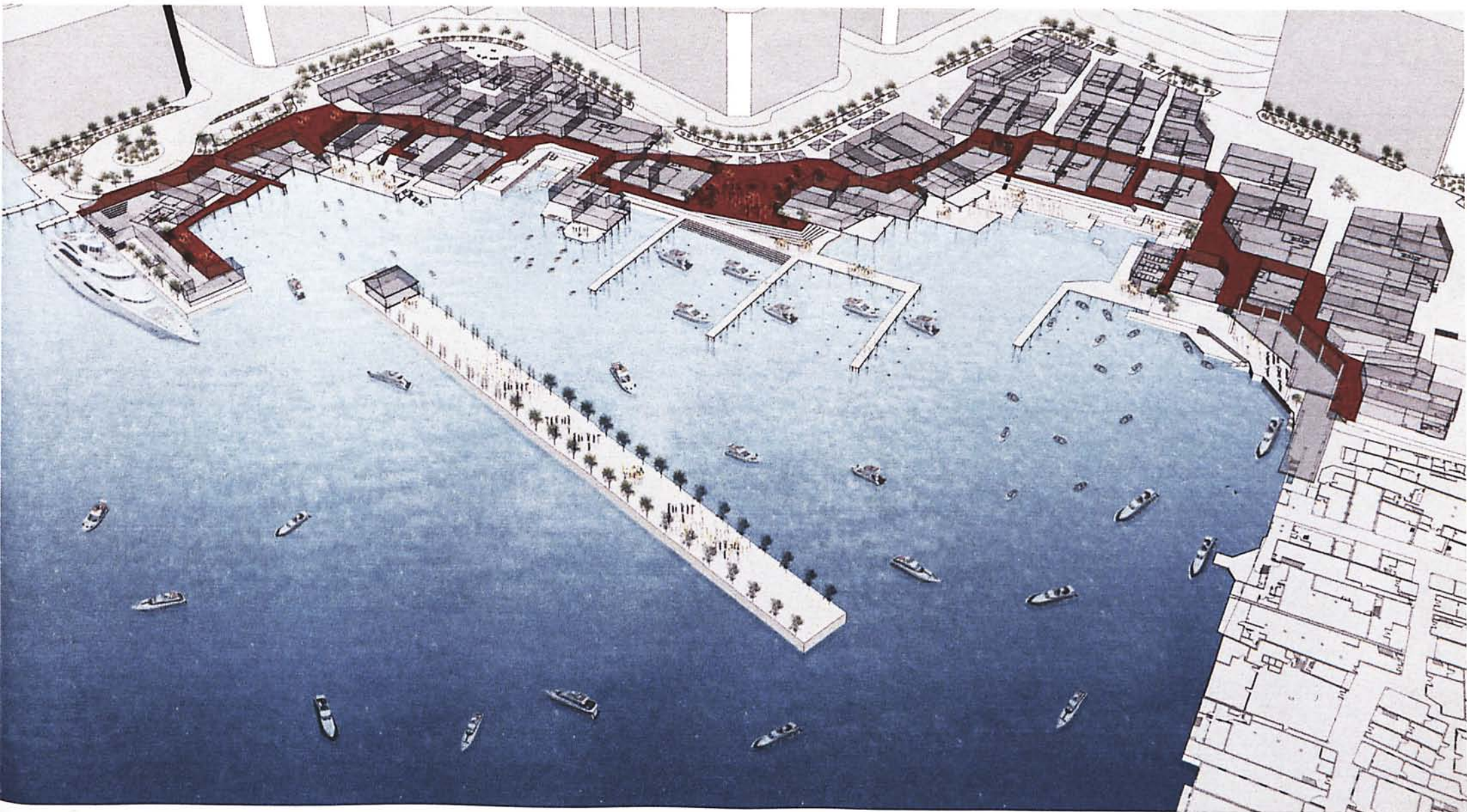


Just take one of the variations for testing, it is found that different waterfront space could be filled with different programs.

When applying those situation on to the whole site with variations, different communal spaces could be generated depending on the space types. And the communal spaces are no longer appear on land, but also on water.



6.2.6 Applying

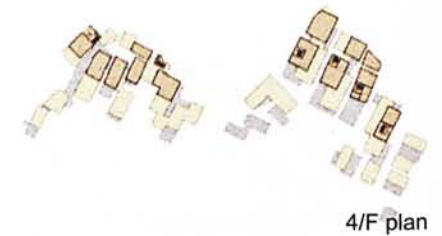
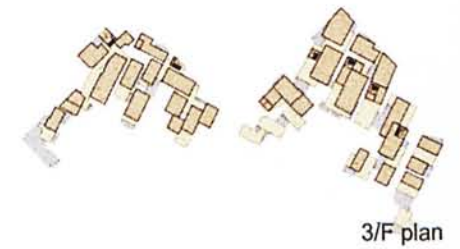
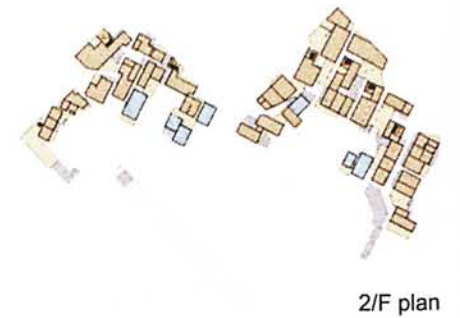
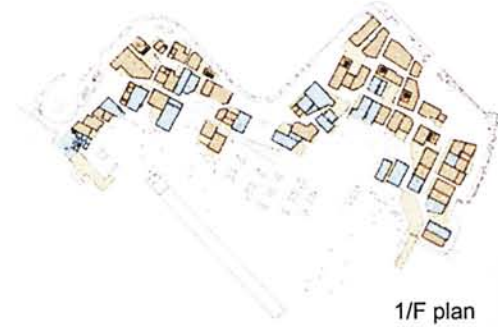


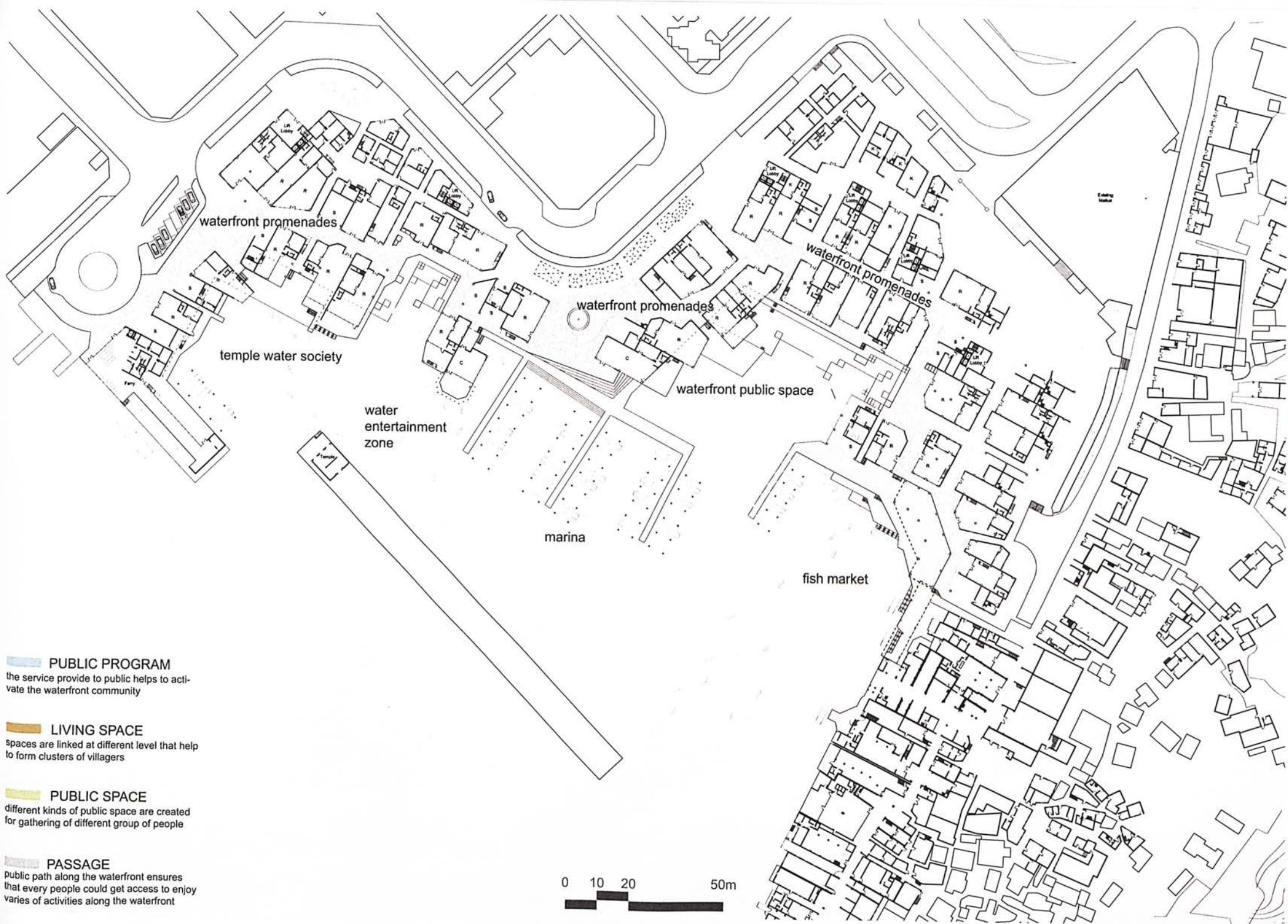
6.3 Design Proposal

1. street network
forms a new circula-
tion typology which
would be penetrated
into the city

2. organic waterfront
promenade extend-
ing from original vil-
lage path

3. varying shoreline
encourages differ-
ent types of activi-
ties happen there





PUBLIC PROGRAM

the service provide to public helps to activate the waterfront community

LIVING SPACE

spaces are linked at different level that help to form clusters of villagers

PUBLIC SPACE

different kinds of public space are created for gathering of different group of people

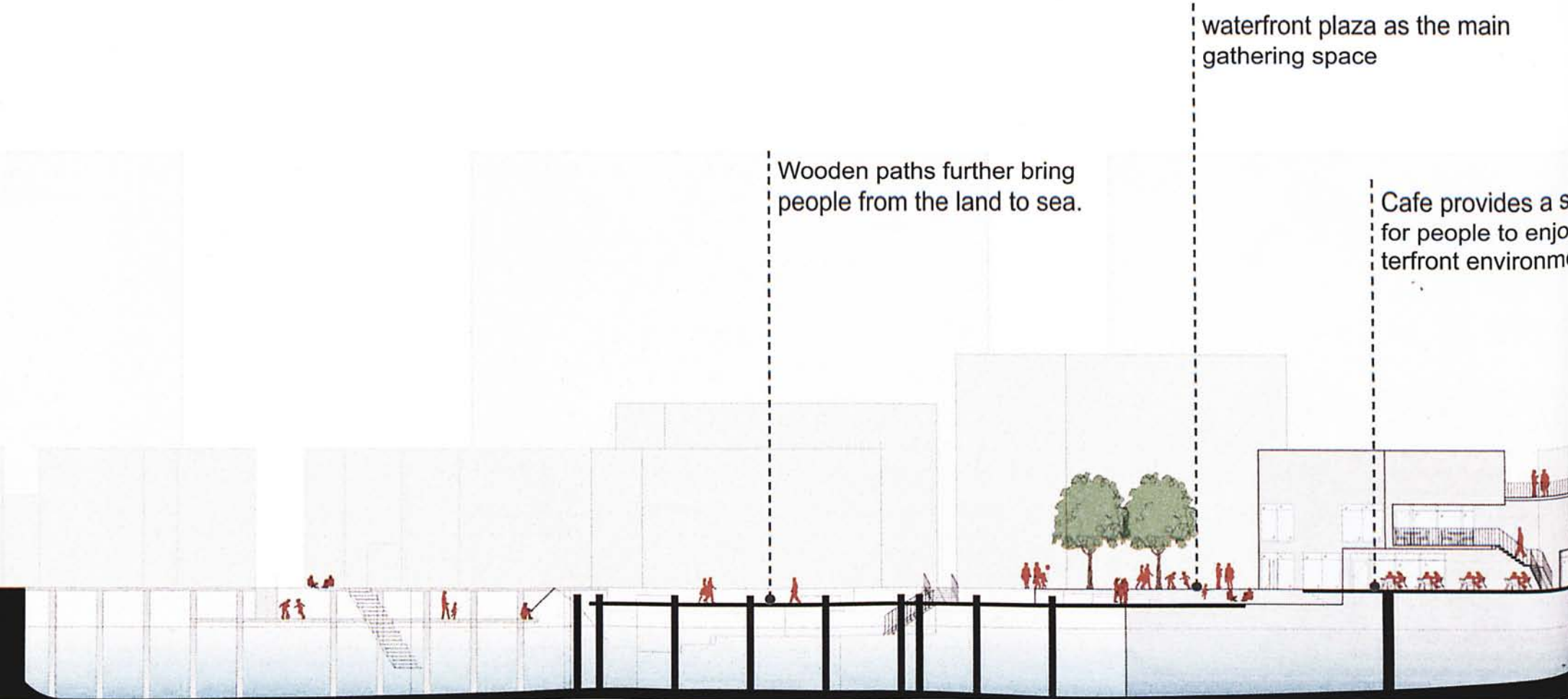
PASSAGE

public path along the waterfront ensures that every people could get access to enjoy varies of activities along the waterfront

0 10 20 50m

6.4 Section

This section shows clearly the relationship among water, land and buildings. More importantly, people could enjoy each space from water to land and the waterfront transitional spaces strongly encourage people to do so.



Wooden paths further bring people from the land to sea.

waterfront plaza as the main gathering space

Cafe provides a space for people to enjoy waterfront environment

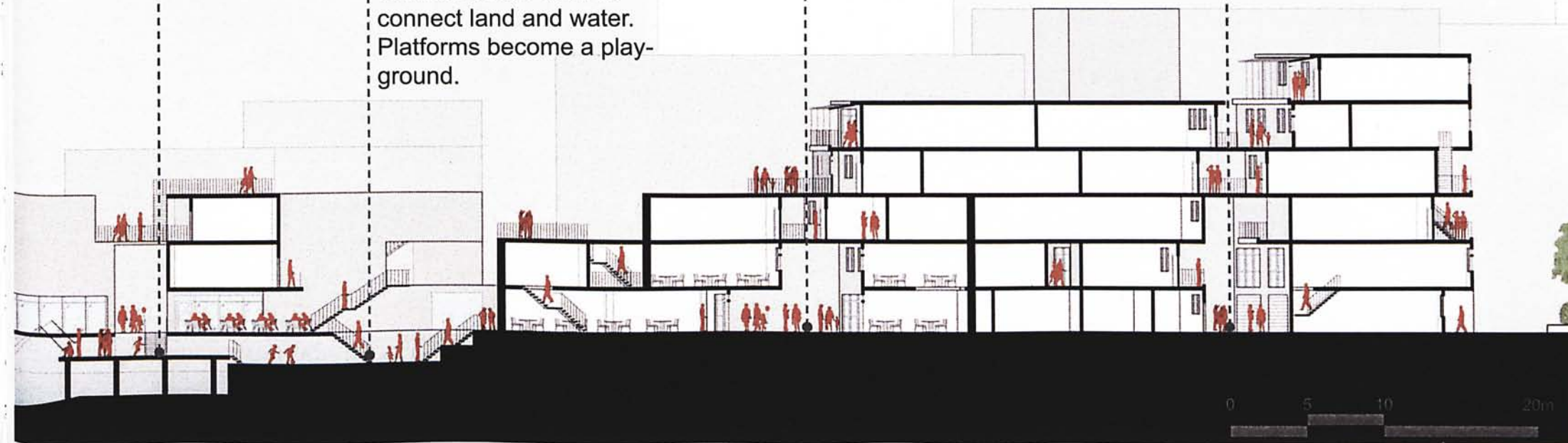
Wooden deck provides a stage for people to get closer to water.

Staircases are used to connect land and water. Platforms become a playground.

First street has close spatial connection both to water and inland buildings

second street with soften street facade by applying light materials

area
wa-



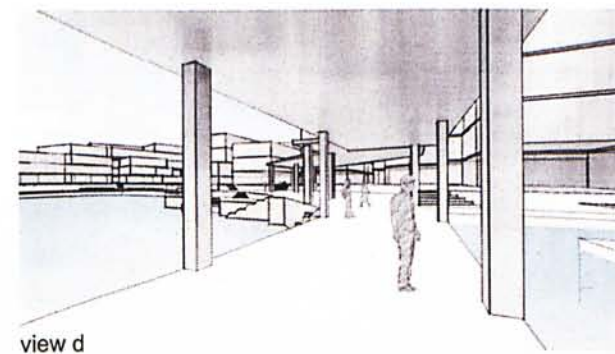
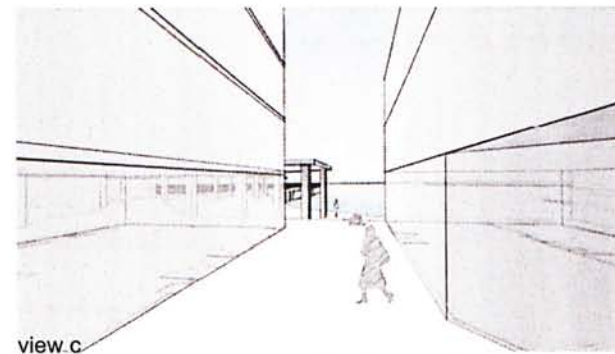
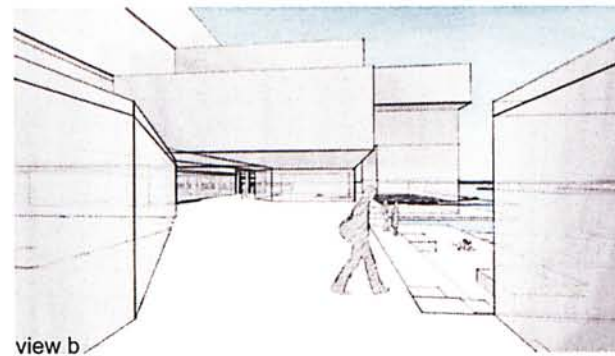
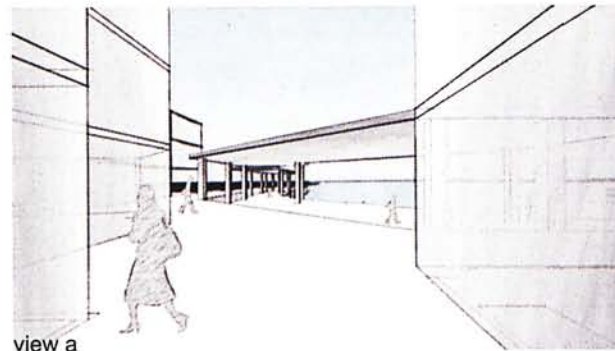
6.5 Final Design

Peaceful habitable waterfront is created finally. As shown in the rendering, people could enjoy different water activities along the waterfront. The villagers could also get to the waterfront public space easily from their living space by passing through the semi-public communal space.

The spatial perspective views show us that the sea view is not blocked and people could enjoy it even from the inland street. As a result, people have a strong sense of water when walking at the street.

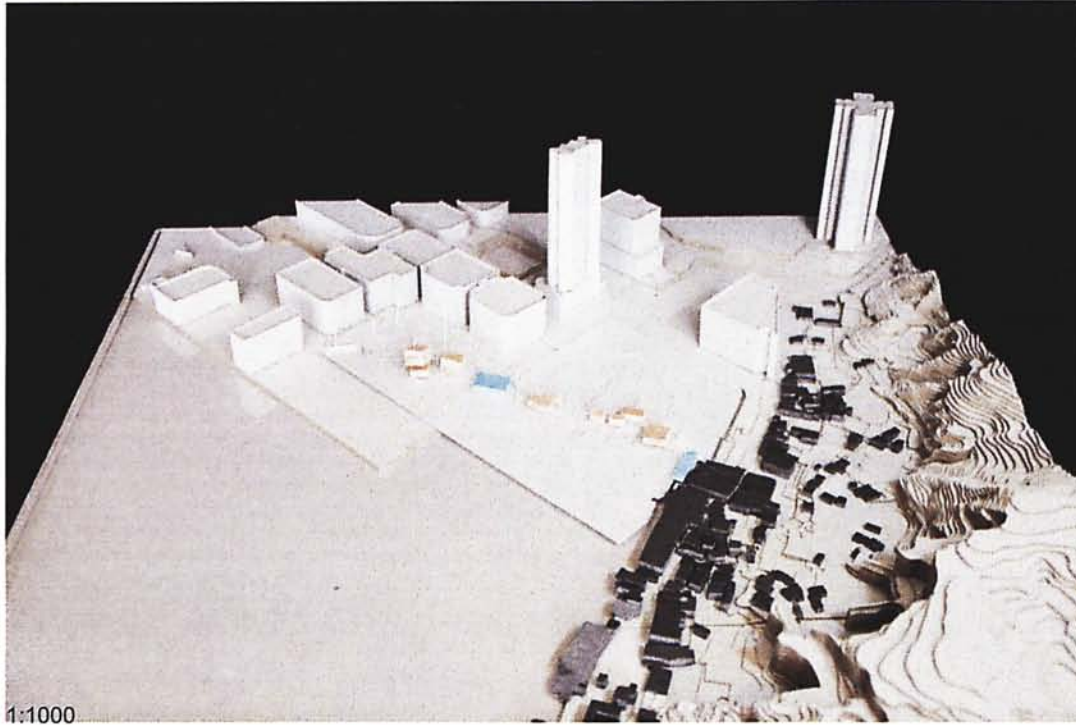
The ground floor is mostly occupied by public programs such as shops, restaurant and cafe which contributes to a greater publicity of the waterfront zone.

Visitors are welcome to enjoy the living atmosphere here since hostels are provided at second floor so as to further activate the site and create a production opportunity for villagers.

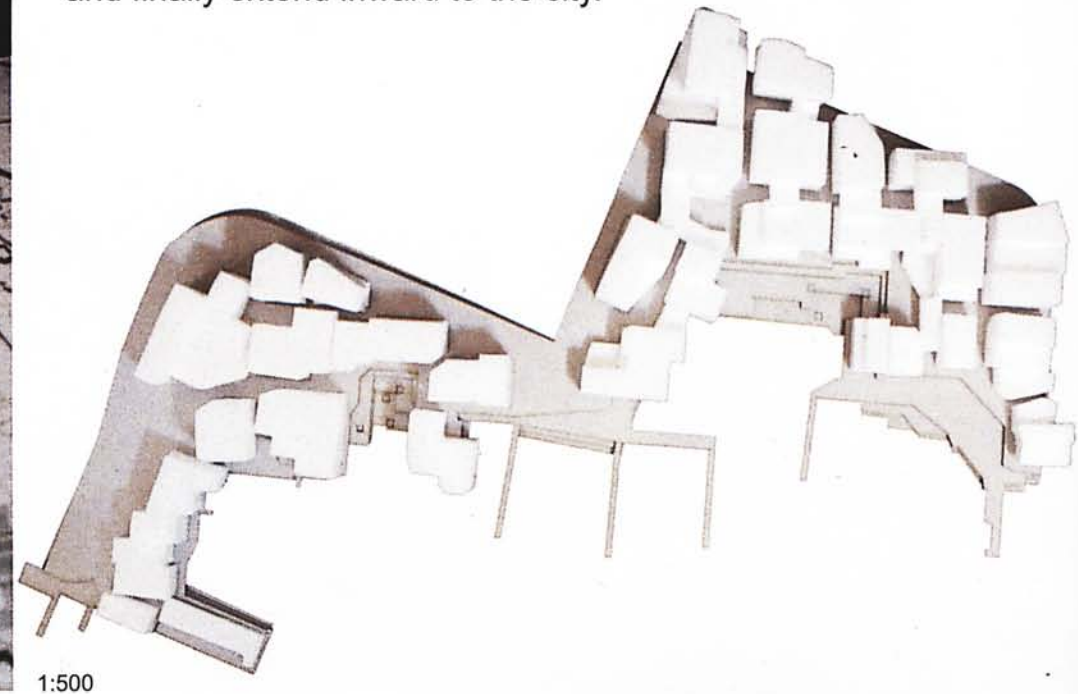
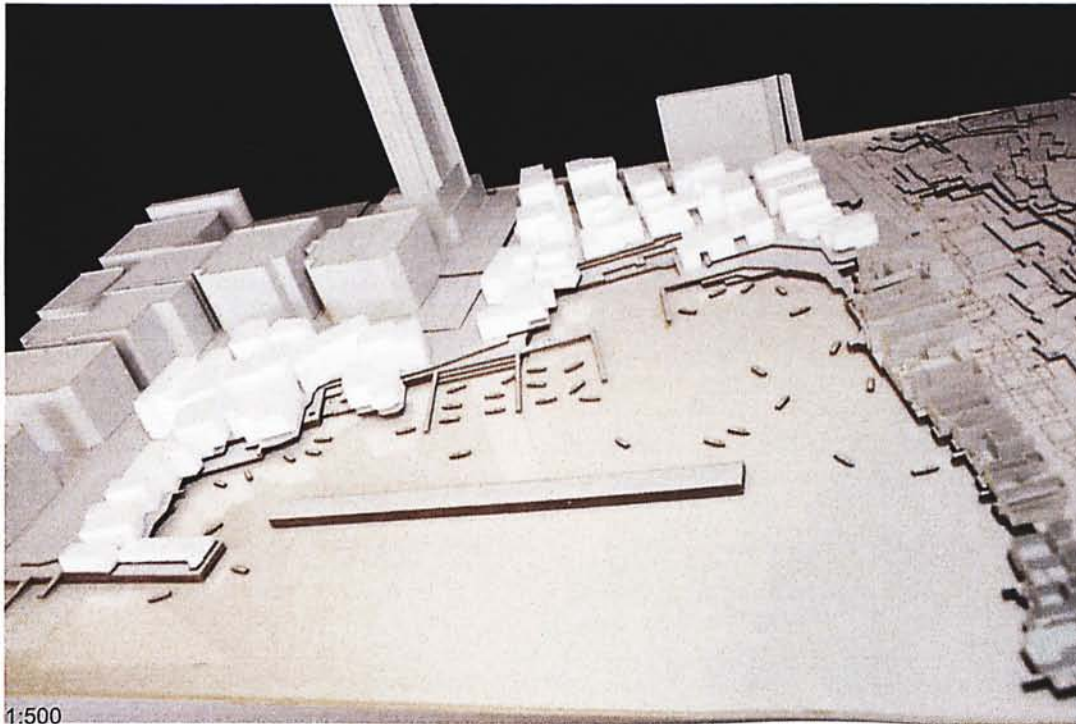


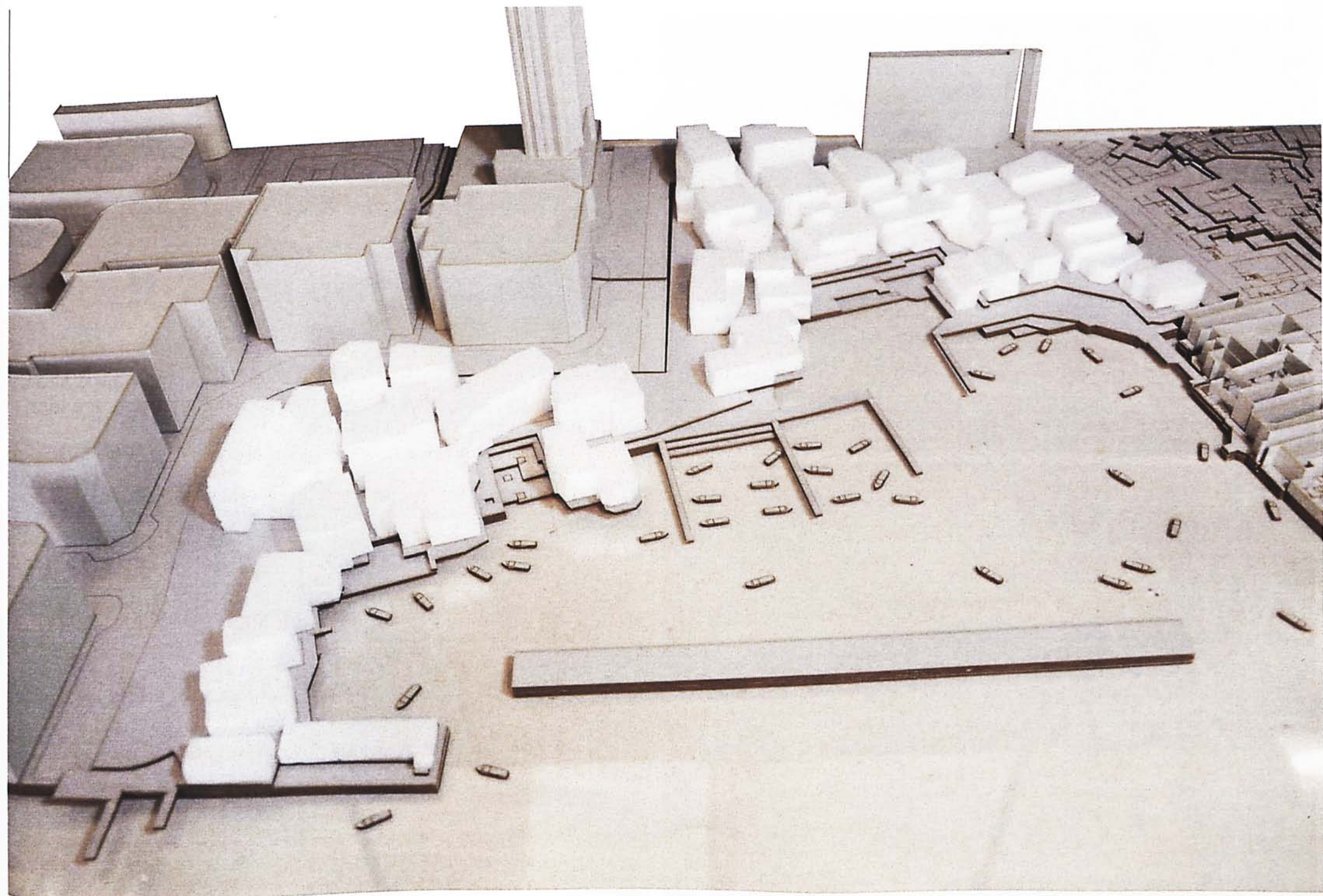


6.6 Models in Different Scale



Following the evolution systems of the existing village, the concept of this design is to extend the existing living condition from the village to the other side, which is a factory zone. By this theory, a main street would be generated first and buildings start to grow along it and finally extend inward to the city.







As show in the 1:250 model, street with different programs is situated along the waterfront and different communal spaces are form from the water-side to the land-side.

The 1:50 model show us how the material could be beneficial to the space transition.





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